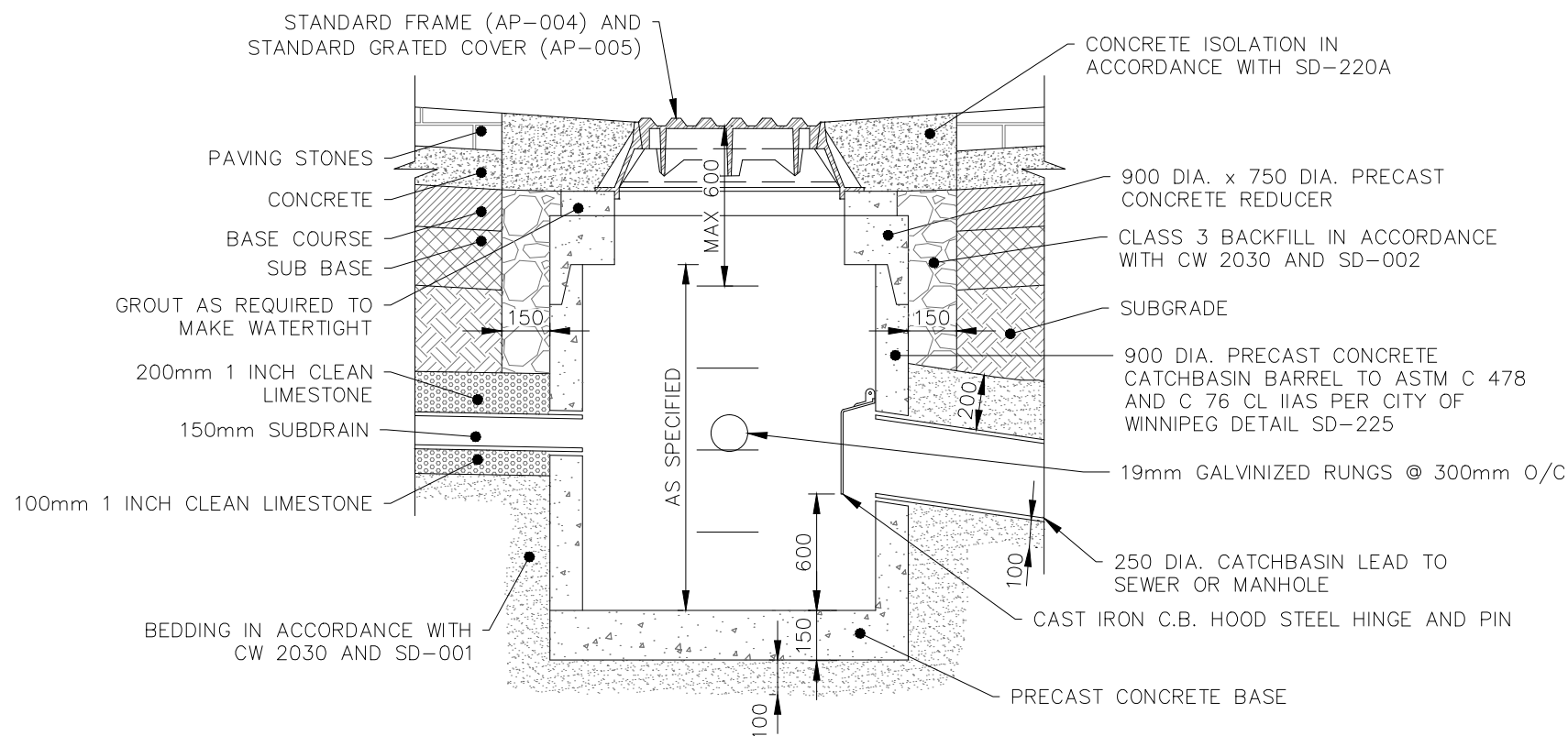
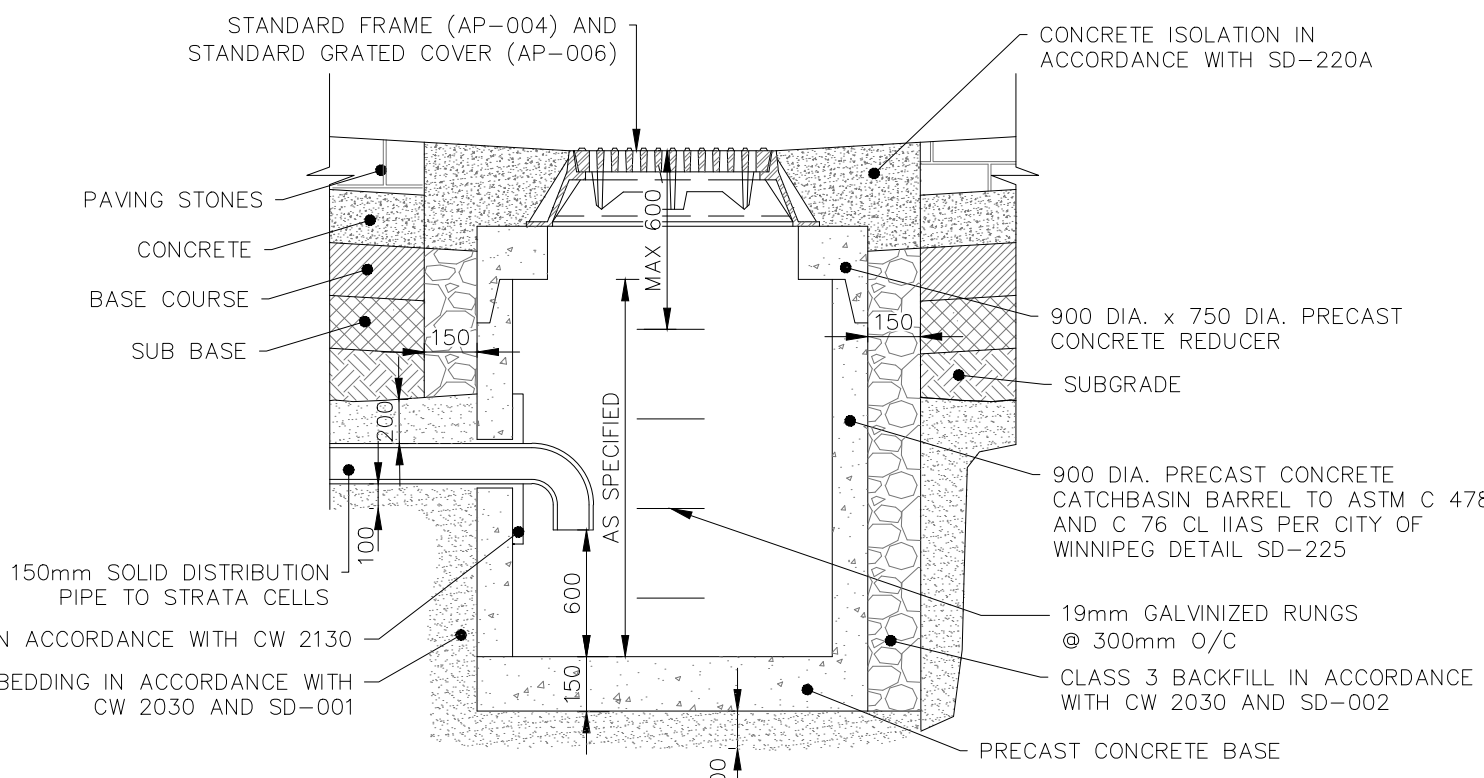


- NOTES:
1. ALL WORK AND MATERIALS TO BE IN ACCORDANCE WITH THE LATEST REVISION OF THE CITY OF WINNIPEG STANDARD CONSTRUCTION SPECIFICATION AND CITY GREEN STRATA CELL SPECIFICATION.
 2. CONTRACTOR TO VERIFY DEPTH OF UTILITIES PRIOR TO CONSTRUCTION. LOCATIONS OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFORMATION OF EXISTENCE AND EXACT LOCATIONS OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.
 3. REFER TO TRANSPORTATION DRAWING FOR PAVING GEOMETRY.
 4. ADD 200.00m TO ALL PROPOSED ELEVATIONS TO OBTAIN GEODETIC.
 5. ALL STRATA CELLS ARE STRATA CELL 60 SERIES.
 6. 125mm AND 150mm DISTRIBUTION PIPE FROM STRATA CELL CATCHBASIN TO STRATA CELL MATRIX TO BE SOLID NON-PERFORATED HDPE.
 7. 125mm LATERAL PIPES TO BE FLEXIBLE, PERFORATED HDPE AND SHOULD BE INSTALLED WITHIN THE TOP LAYER OF MODULES.
 8. 150mm VERTICAL PIPE TO BE NON-PERFORATED HDPE TO CONNECT TO THE SURFACE OF PAVEMENT AND CAPPED WITH ROOTRAIN ARBORVENT(SQUARE SHAPE).
 9. 150mm SUBDRAIN TO BE FLEXIBLE, PERFORATED HDPE PIPE BELOW STRATA CELL MATRIX AND NON-PERFORATED HDPE PIPE OUTSIDE OF STRATA CELL MATRIX.
 10. LAND DRAINAGE SEWER CATCHBASIN LEADS TO BE PVC SD-35. CATCHBASINS ARE TO BE IN ACCORDANCE WITH THE CITY OF WINNIPEG STANDARD DETAILS SD-024 AND SD-025. SUMP DEPTH FOR ALL CATCHBASINS SHALL BE A MINIMUM OF 0.6m.
 11. ADJUST MH, CB RIMS, AND VALVES TO NEW GRADES.
 12. CONTRACTORS TO TAKE PRECAUTIONARY STEPS TO PROTECT EXISTING TREES WITHIN THE LIMITS OF CONSTRUCTION FROM DAMAGE FROM CONSTRUCTION ACTIVITIES AS OUTLINED IN THE SPECIFICATIONS.
 13. MODIFIED BARRIER CURB TO BE USED AT ALL INTERSECTION RADII, BACK LANE RADII, AND BULL NOSES.



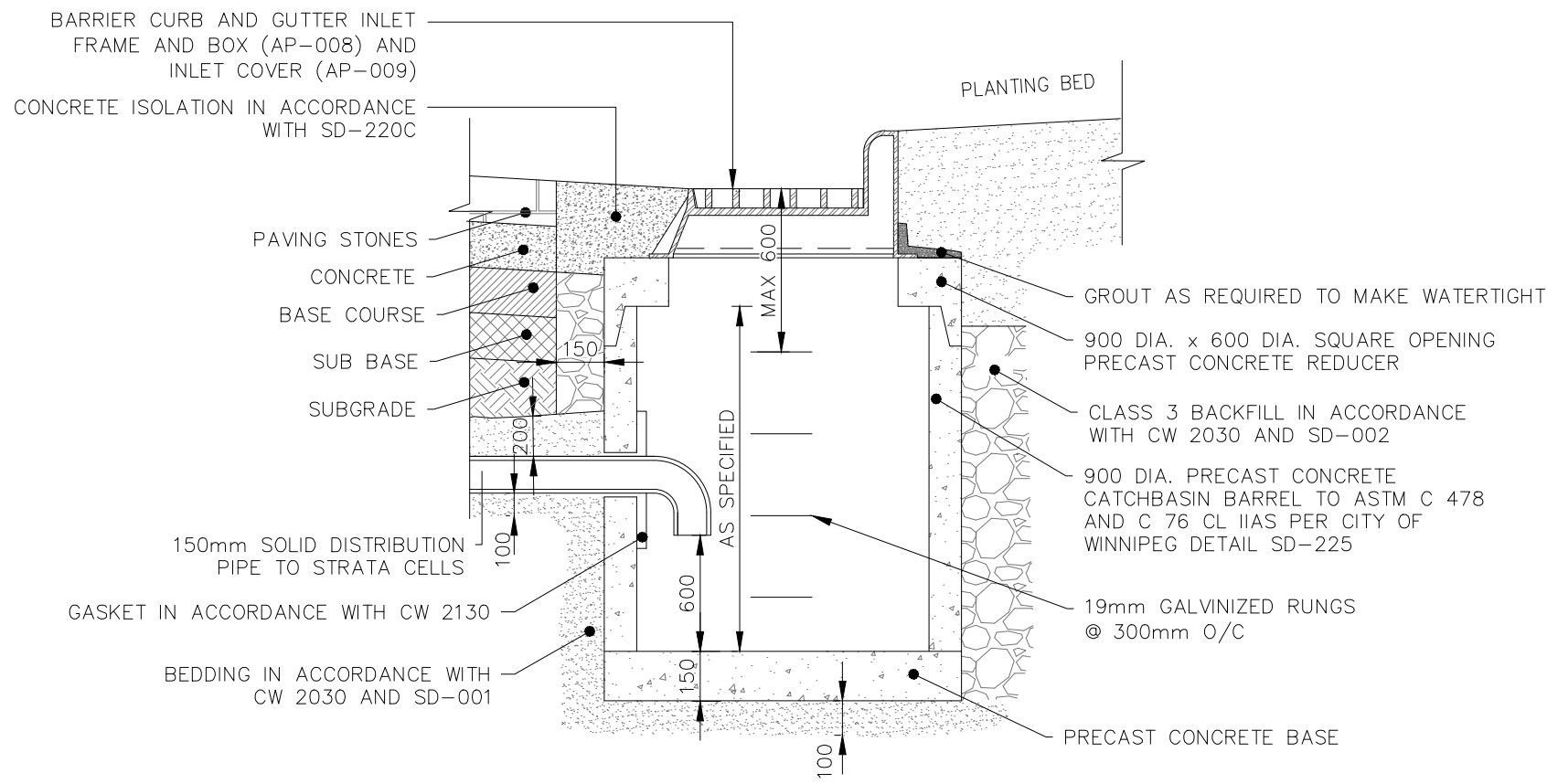
LDS CATCH BASIN DETAIL

NTS



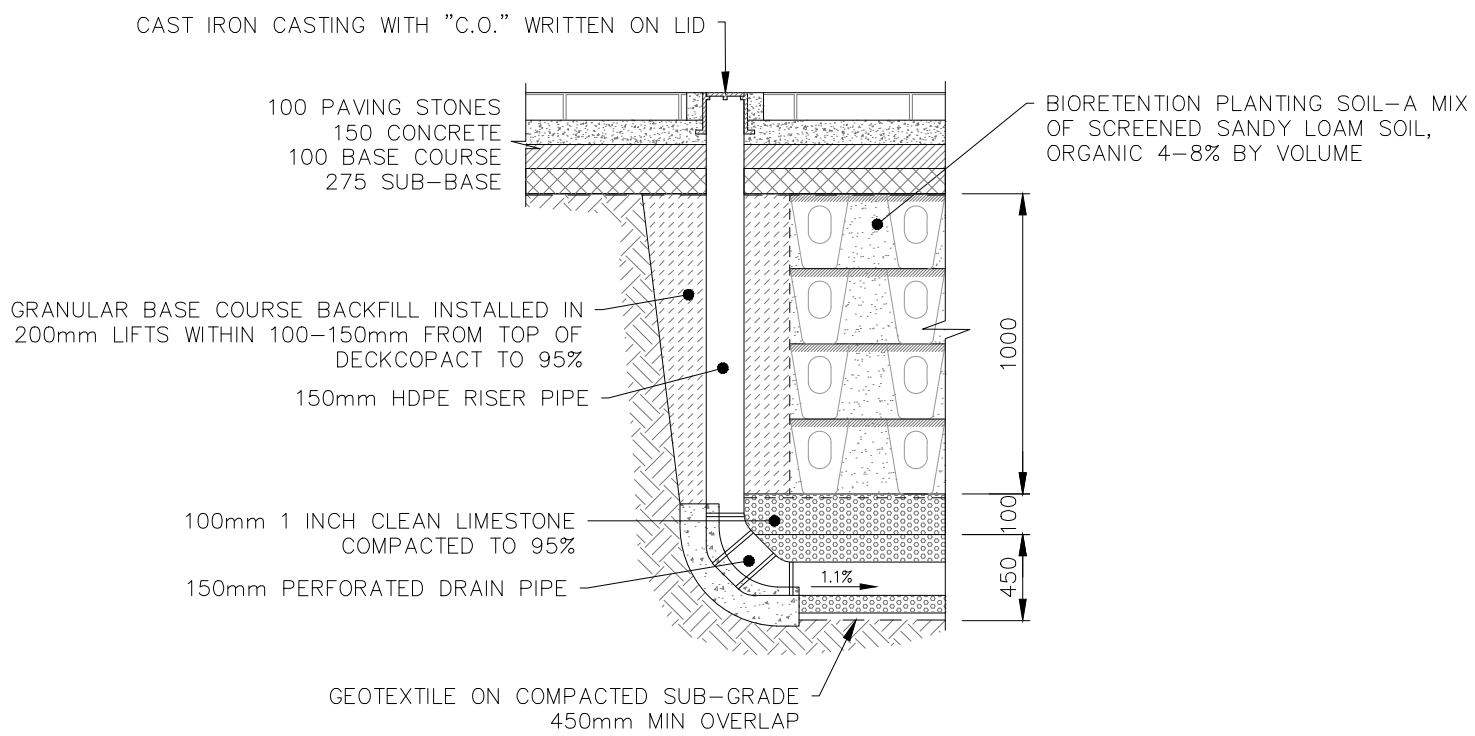
STRATA CELL CATCH BASIN 1, 2 & 3 DETAIL

NTS



STRATA CELL CATCH BASIN 4 & 5 DETAIL

NTS



CLEANOUT DETAIL

NTS

NOTE:
These design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.

| | | | | | | | |
|---------------------|-------------|----------|-----------------------|-------------|----------|------------------------|----------------|
| WATERMAIN | --- | + | HYDRANT | ● | | | |
| LAND DRAINAGE SEWER | --- | ⊗ | VALVE | ⊗ | | | |
| WASTE WATER SEWER | --- | ⊕ | CURB STOP | ● | | | |
| HYDRO | --- | 230.99 | GROUND GRADE | (31.00) | | | |
| M.T.S. | --- | (30.99) | PAVEMENT GRADE | | | | |
| GAS | --- | --- | ANCHOR | | | | |
| SIGNALS | --- | + | ORNAMENT LIGHT | | | | |
| MANHOLE | ● | ⊕ | HYDRO POLE | | | | |
| CATCH BASIN | ■ | □ | CURB RAMP | | | | |
| CURB INLET | ▲ | ▼ | EDGE OF SIDEWALK | | | ROADWAY CENTRE LINE | --- |
| UTILITIES ADJUST | △ □ ○ | --- | PROPERTY LINE | --- | --- | WEST GUTTER | --- |
| CLEANOUT | ⊗ | --- | BARRIER CURB | --- | --- | EAST GUTTER | --- |
| ROOTRAIN ARBORVENT | ■ | --- | BARRIER CURB & GUTTER | --- | --- | SIDEWALK | --- |
| PLUG | ■ | --- | PAVING STONES | ▨ | --- | PROPERTY/BUILDING LINE | --- |
| EXISTING | LEGEND-PLAN | PROPOSED | EXISTING | LEGEND-PLAN | PROPOSED | EXISTING | LEGEND-PROFILE |
| | | | | | | | PROPOSED |

LOCATIONS APPROVED
UNDERGROUND STRUCTURES

SIGNED BY: _____ DATE: _____
SUPV U/G STRUCTURES

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. CONFORMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING.

G.M. - ELEV. 232.205
"O" IN OPEN ON FIREHYDRANT LOCATED AT THE SOUTHEAST CORNER OF RORIE STREET AND MARKET AVENUE.

DESIGNED BY: JZ
DRAIN BY: VA

3 ISSUED FOR TENDER 05/25/16 JZ
2 ISSUED TO U/G STRUCTURES REVIEW 04/08/16 JZ
1 ISSUED FOR CITY OF WINNIPEG REVIEW 03/18/16 JZ

NO. REVISIONS DATE BY

MMM GROUP
DESIGNED BY: JZ
DRAIN BY: VA
CHECKED BY: RMB
APPROVED BY: JZ

HOR. SCALE 1:250
VERTICAL 1:10
RELEASED FOR CONSTRUCTION
DATE 03/15/16

DATE

ENGINEER'S SEAL
PROF. OF MANITOBA
REGISTERED PROFESSIONAL ENGINEER
34326

CONSULTANT ACAD DWG. NO.
5515038-C05

Winnipeg
NORTH EAST EXCHANGE DISTRICT ENGINEERING STUDY

THE CITY OF WINNIPEG
PUBLIC WORKS DEPARTMENT
TRANSPORTATION DIVISION
STREET RENEWALS
RECONSTRUCTION
JOHN HIRSCH PLACE
STRATA CELL PLAN AND DETAILS

CITY DRAWING NUMBER
SHEET 5 OF 39

BID NO.
345-2016

METRIC

WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

APEGM
Certificate of Authorization

MMM Group Limited
No. 4531