

- ### GENERAL NOTES
- THE ORIGINAL TOPOGRAPHY, GROUND ELEVATION AND SURVEY DATA SHOWN ARE SUPPLIED FOR INFORMATION PURPOSES ONLY, AND IMPLY NO GUARANTEE OF ACCURACY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL INFORMATION OBTAINED FROM THEM.
 - THE CONTRACTOR IS TO OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT.
 - THE CONTRACTOR IS TO DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. VERIFY AND ASSURE ALL RESPONSIBILITY FOR EXISTING UTILITIES WHETHER OR NOT SHOWN ON THESE DRAWINGS. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
 - ALL "GREEN AREAS" TO BE TREATED WITH 75mm TOPSOIL, SEED & MULCH AS SOON AS FEASIBLE.
 - RESTORE ALL TRENCHES AND SURFACES OF PUBLIC ROAD ALLOWANCES TO CONDITION EQUAL OR BETTER THAN ORIGINAL CONDITION AND TO THE SATISFACTION OF CITY OF OTTAWA AUTHORITIES.
 - EXCAVATE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIAL, SUCH AS ASPHALT, CURBING AND DEBRIS, OFF SITE AS DIRECTED BY THE ENGINEER, OR THE CITY.
 - TOPSOIL TO BE STRIPPED AND STOCKPILED FOR REHABILITATION. CLEAN FILL TO BE PLACED IN FILL AREAS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 - ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER UNLESS OTHERWISE SPECIFIED.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING THE SUPPLY, INSTALLATION, AND REMOVAL OF ALL NECESSARY SIGNAGE, ELIMINATORS, MARKERS AND BARRIERS.
 - DO NOT ALTER GRADING OF THE SITE WITHOUT PRIOR APPROVAL OF THE CITY.
 - ALL ROADWAY, PARKING LOT, AND GRADING WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS.
 - PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDING.
 - THE CONTRACTOR FOR INSPECTION OF ROUGH GRADING OF PARKING LOTS, ROADWAYS AND LANDSCAPED AREAS PRIOR TO PLACEMENT OF ASPHALT AND TOPSOIL. ALL DEFICIENCIES NOTED SHALL BE RECTIFIED TO THE CITY'S SATISFACTION PRIOR TO PLACEMENT OF ANY ASPHALT, TOPSOIL, SEED & MULCH AND/OR SOIL.
 - ALL DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
 - THE OUTLET CONTROL INSTALLED IN CB/MH MUST BE A PEEX TYPE "C" INLET CONTROL DEVICE.
 - HYDRO, GAS AND BELL SERVICE LOCATIONS SUBJECT TO THE APPROVAL AGENCY:
TELEPHONE SERVICE - BELL CANADA
ELECTRICAL SERVICE - OTTAWA HYDRO
GAS SERVICE - ENBRIDGE
CABLE - ROGERS
- INSTALLATION TO BE IN ACCORDANCE WITH CURRENT CODES AND STANDARDS OF APPROVAL AGENCIES (BELL, HYDRO) AND THE CITY OF OTTAWA.

- ### EROSION AND SEDIMENT CONTROL NOTES
- THE SITE GRADING CONTRACTOR IS RESPONSIBLE FOR ENSURING SEDIMENT AND EROSION CONTROL STRUCTURES ARE INSTALLED AS SHOWN. CARE SHALL BE TAKEN AT THE REMOVAL STAGE TO ENSURE THAT ANY SILT THAT HAS ACCUMULATED IS PROPERLY HANDLED AND DISPOSED OF.
 - AT THE DISCRETION OF THE PROJECT MANAGER OR MUNICIPAL STAFF, ADDITIONAL SILT CONTROL DEVICES SHALL BE INSTALLED AT DESIGNATED LOCATIONS.
 - FOR STRAW BALE FLOW CHECK USE OPSD 219-180. FOR SILT FENCE BARRIER, USE OPSD 219.110.

- ### SEWER NOTES
- CONSTRUCT ALL SEWER AND APPURTENANCES TO ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS, AS WELL AS THE CITY OF OTTAWA STANDARDS AS INDICATED.
 - SEWER TRENCHING AND BEDDING SHALL CONFORM TO OPSD 802.010 AND 802.013 UNLESS NOTED OTHERWISE.
 - BEDDING SHALL BE A MINIMUM 150mm OF GRANULAR "A", COMPACTED TO MINIMUM 95% STANDARD PROCTOR DRY DENSITY. CLEAR STONE BEDDING SHALL NOT BE PERMITTED.
 - SUB-BEDDING, IF REQUIRED SHALL BE AS PER THE DIRECTION GEOTECHNICAL ENGINEER
 - BACKFILL TO AT LEAST 300mm ABOVE TOP OF PIPE WITH GRANULAR "A" OR SAND.
 - TO MINIMIZE DIFFERENTIAL FROST HEAVING, TRENCH BACKFILL (FROM PAVEMENT SUBGRADE TO 2 METRES BELOW FINISHED GRADE) SHALL MATCH EXISTING SOIL CONDITIONS.
 - SEWERS AND CONNECTIONS 150mm DIAMETER AND SMALLER TO BE PVC SDR 28 OR APPROVED EQUIVALENT.
 - SEWERS AND CONNECTIONS 200mm DIAMETER AND LARGER TO BE PVC SDR 35 OR APPROVED EQUIVALENT.
 - INSULATE ALL STORM AND SANITARY SEWERS/SERVICES THAT HAVE LESS THAN 1.5m OF COVER WITH THERMAL INSULATION AS PER DETAIL.
 - SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN AND DETAILED TO WITHIN 1m OF BUILDING. ALL ENDS OF SERVICES TO BE PROPERLY CAPPED AND LOCATED WITH 2"x4" LONG MARKER.
 - ALL CATCHBASIN LEADS ARE TO BE 200mm Ø, SLOPE TO BE 1% UNLESS OTHERWISE NOTED.
 - ANY SANITARY MANHOLES LOCATED IN STORMWATER PONING AREAS TO BE A WATERIGHT MANHOLE COVER AS PER OPSD 401.030.
 - STORM CATCHBASINS AND MANHOLES TO BE EQUIPPED WITH 3.0m x 150mm Ø PRE-WRAPPED PERFORATED PIPE IN ALL DIRECTIONS 1.0M BELOW FINISHED GRADE.

- ### WATERMAIN NOTES
- CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH OPSD STANDARDS AND SPECIFICATIONS AS WELL AS CITY STANDARDS AS INDICATED.
 - RESIDENTIAL SERVICE CONNECTIONS TO CONFORM TO BE 19mm. COPPER PIPING AND SHALL CONFORM TO ASTM B88 TYPE "K" SOFT.
 - WATERMANS AND/OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 2.4m. OTHERWISE THERMAL INSULATION IS REQUIRED AS PER CITY DWG. No. 722.
 - IF THE WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS EQUAL TO OR LESS THAN THAT WHICH IS RECOMMENDED BY THE MANUFACTURER.
 - WATERMANS TO BE C900 CLASS 150 DR-18 OR APPROVED EQUIVALENT.
 - EXISTING SERVICE TO BE BLANKED AT MAN BY CITY FORCES (EXCAVATION BY SITE CONTRACTOR)
 - CONNECTION TO EXISTING BY CITY, EXCAVATION, BACKFILLING AND REINSTATEMENT BY CONTRACTOR

- ### TYPICAL DETAILS
- ASPHALT GRADE: PG-58-34**
- 40mm HL3
50mm HL8
150mm GRAN "A"
- ASPHALT GRADE: PG-58-34**
- 50mm HL3
150mm GRAN "A"
300mm GRAN "B"
- HEAVY DUTY PAVEMENT CROSS-SECTION**
NOT TO SCALE
- ASPHALT PARKING CROSS-SECTION**
NOT TO SCALE

IPEX PLUG TYPE ORIFICE

NOT TO SCALE

1. I.C.D. PLUG TYPE ORIFICE, REMOVABLE FOR CLEANING PURPOSES.

2. I.C.D. MANUFACTURED FROM PVC.

3. I.C.D. MACHINED TO PROVIDE FRICTION FIT INTO THE OUTLET PIPE.

Size of orifice opening determined by manufacturer.

WATER SERVICE COVER TABLE

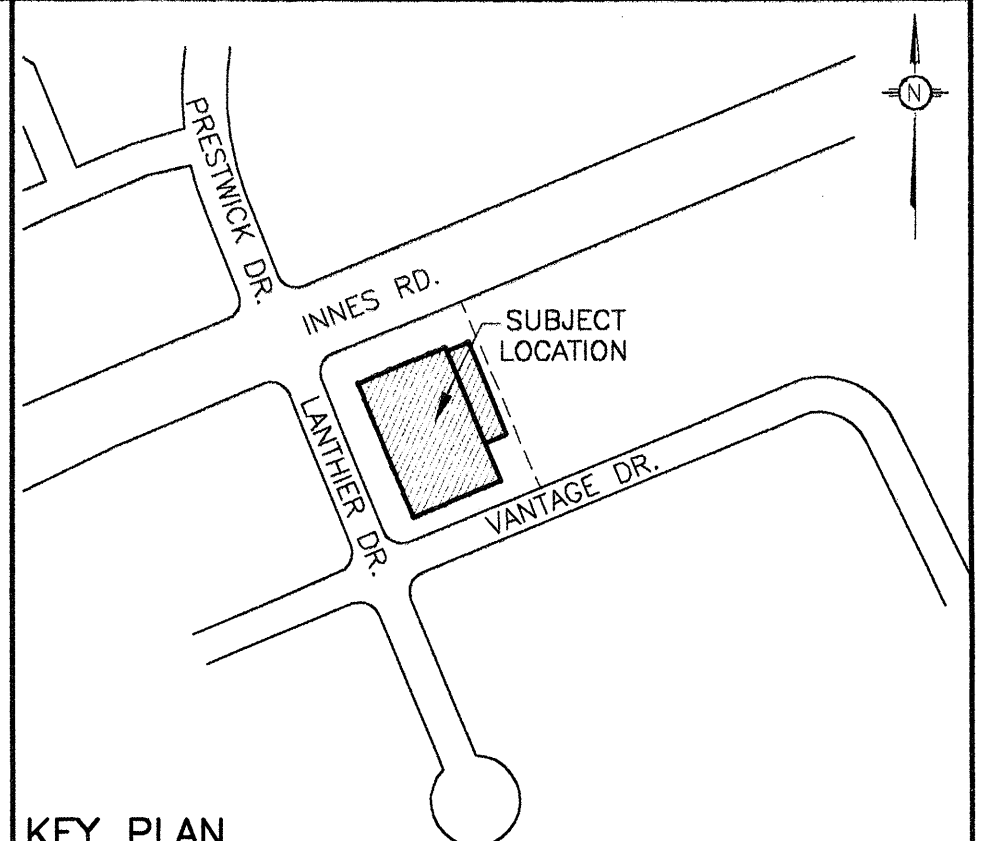
LOCATION	STATION	FINISHED TOP OF GRADE	TOP OF SERVICE	DEPTH
CONNECTION	1+000	88.00	85.95	2.05
150 mm VALVE	1+006.7	88.08	85.20	2.88
BUILDING	1+030.8	88.17	85.20	2.97

STORM WATER STORAGE TABLE

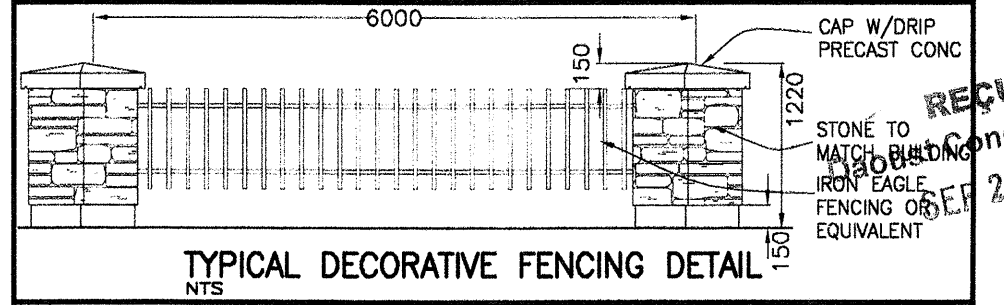
LOCATION	FLOW (liters/sec)	5 yr	100 yr
MAIN ROOF	10	77.5m ³	181m ³
D/T ROOF	5	7.4m ³	20m ³
PARKING	31.8	74.6m ³	123m ³
TOTAL	46.8	159.5m ³	324m ³

* Head is measured from the centre line of the orifice to the water elevation or flood level.

Calibration Curves for Standard ICDs



- ### LEGEND
- PROPOSED GRADE
 - EXISTING GRADE
 - CORNER LOT GRADES
 - DIRECTION OF SURFACE WATER DRAINAGE
 - PROPOSED GRADES
 - PROPOSED BARRIER CURB
 - PROPOSED DEPRESSED CURB
 - EXISTING GRADES
 - PARKING SPOT NUMBERS
 - PROPOSED BUILDING ENTRANCE
 - PROPOSED CATCH BASIN
 - PROPOSED MANHOLE
 - PROPOSED CURB STOP
 - PROPOSED WATER METER
 - PROPOSED REMOTE WATER METER
 - EXISTING SANITARY SEWER MANHOLE
 - EXISTING STORM SEWER MANHOLE
 - EXISTING WATERMAIN
 - EXISTING SANITARY SEWER
 - EXISTING STORM SEWER
 - PROPOSED WATERMAIN
 - PROPOSED SANITARY SEWER
 - PROPOSED STORM SEWER
 - PROPOSED BELL/CABLE
 - PROPOSED GAS
 - PROPOSED HYDRO
 - PROPOSED FENCE
 - PROPOSED HEAVY DUTY PAVEMENT
 - 5 YR PONDING
 - 100 YR PONDING
 - PROPOSED FIRE ROUTE



ALL ELEVATIONS ON THIS PLAN ARE GEODETIC

REVISIONS

No.	DESCRIPTION	DATE	BY
5	REVISED PER CITY COMMENTS	MAY 30/07	TP
4	ISSUED FOR REVIEW REVISED PER ARCHT'L CHANGES	FEB 28/07	TP
3	REVISED PER CITY COMMENTS	FEB 13/07	TP
2	REVISED PER CITY COMMENTS	FEB 02/07	TP
1	REVISED PER OWNER'S	DEC 05/06	TP
0	ISSUED FOR REVIEW	NOV 03/06	TP

DESIGNED TP
DRAWN dnm
CHECKED TP

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INNES ROAD SELF STORAGE
2015 LANTHER DRIVE, OTTAWA, ON

SITE GRADING AND DRAINAGE PLAN

Consulting Engineers of Ontario

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DATE: OCT 16, 2006 SCALE: 1:300 metric PROJECT No.: P06-005 DWG No.: C1.1

