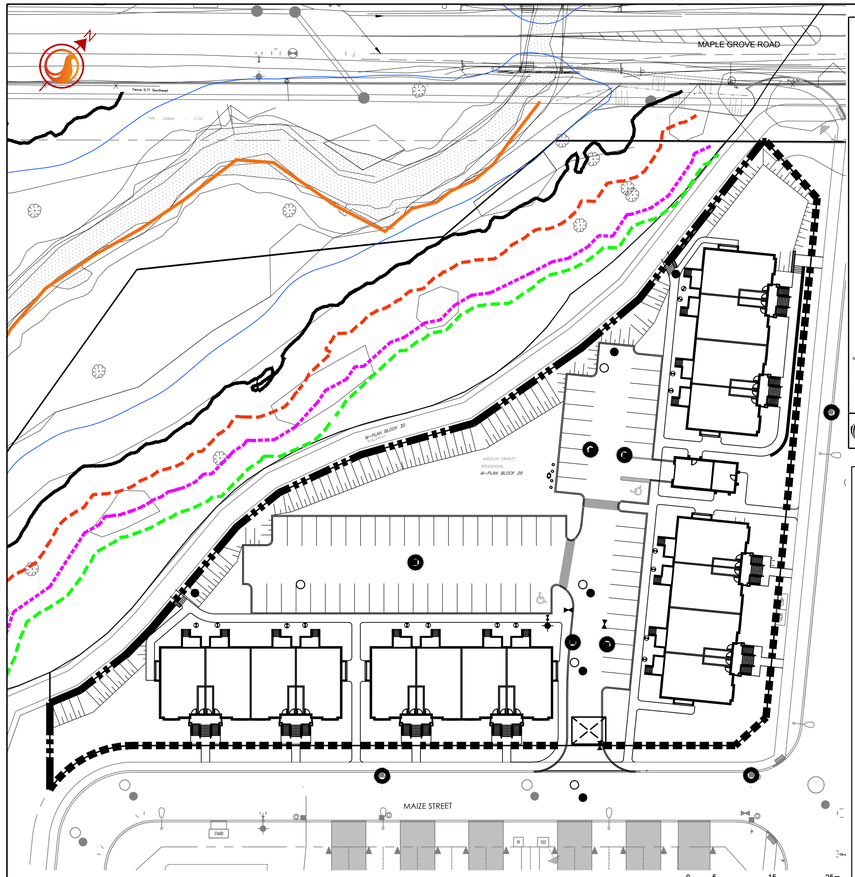
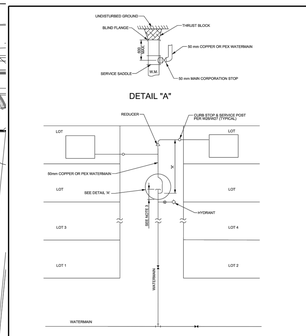
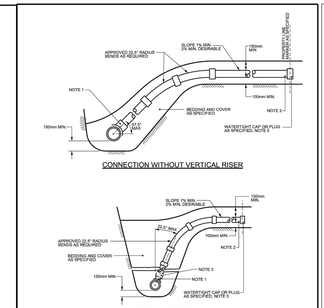



NOTES:
1. DIMENSION 'H' (TOTAL DISTANCE OF 50mm DIA. COPPER OR PEX MAIN), TO BE CALCULATED BY HYDRAULIC ANALYSIS, IN ORDER TO ENSURE THAT THE MINIMUM SERVICE PRESSURE OF 275kPa CAN BE MAINTAINED UNDER THE MAXIMUM HYDRAULIC ANALYSIS INCLUDED IN CURRENT MOECC CLIMATE MAX-DAY (LAWN SPRINKLER DEMANDS), HYDRAULIC ANALYSIS INCLUDED IN CURRENT MOECC CLIMATE MAX-DAY (LAWN SPRINKLER DEMANDS), AND MAXIMUM SERVICE PRESSURE OF 690kPa.
2. DIMENSION 'H' NOT TO EXCEED 40m.
3. HYDRANT TO BE PLACED AS CLOSE TO THE END OF THE LARGER DIAMETER MAIN, AS POSSIBLE, 0.5m MAXIMUM DISTANCE.
4. THE 50mm CORPORATION STOPS SHALL BE USED AS DISINFECTION NOZZLES & LINE VALVES.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

N.T.S.

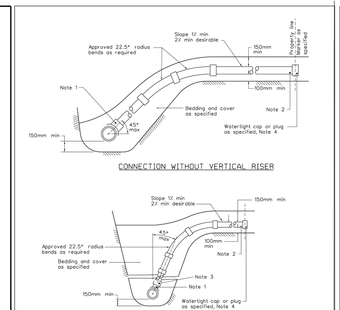
Ottawa | WATERMAIN LAYOUT FOR RESIDENTIAL DEAD-END STREETS | DATE: JULY 2002 | REV. DATE: MARCH 2014 | DWG. No. W37.2




NOTES:
1. ALL DIAMETERS OF SERVICE CONNECTIONS THAT HAVE NOMINAL DIAMETERS NO GREATER THAN 50% OF THE NOMINAL DIAMETER OF THE MAIN SHALL BE MADE USING A BELL END INSERT AS PER OPS 1841 OR AN APPROVED RUBBER GASKETED INSERT, HYDROSEAL OR EQUAL.
2. BAND CLAMP SERVICES TO BE 100mm AND STORM SERVICES TO BE 150mm FOR NEW RESIDENCES UNLESS SPECIFIED OTHERWISE. SERVICE PIPE AND FITTINGS MUST BE THE APPROVED CSA STYLE, SDR26 PRODUCTS UNLESS SPECIFIED OTHERWISE.
3. APPROVED CONTROLLED SETTLEMENT JOINTS OPTIONAL FOR SERVICE CONNECTIONS TO MAIN SEWERS UP TO 5m DEEP. WHERE APPROVED CONNECTIONS TO SEWERS OVER 5m DEEP REQUIRE APPROVED CONTROLLED SETTLEMENT JOINTS.
4. VERTICAL RISER SHALL BE SAME AS SERVICE PIPE UNLESS OTHERWISE SPECIFIED.
5. CAP OR PLUG AT THE PROPERTY LINE SHALL BE ADEQUATELY BRACED TO WITHSTAND TESTING PRESSURE.
6. FOR NEW CONSTRUCTION, INSERTS MUST BE INSTALLED ON THE MAIN PIPE BEFORE THAT PIPE IS LAID. FOR SERVICE/BRANCHES 375mm DIA. OR LESS, APPROVED TORRED TEEP MAY BE USED.
7. APPROVED CUT-IN TOOL MUST BE USED FOR FIELD MADE CONNECTIONS.
8. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

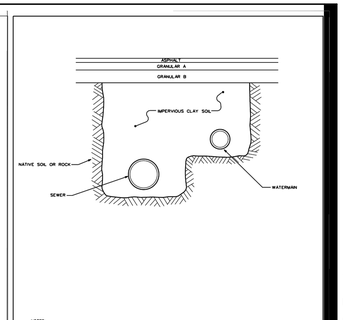
N.T.S.

Ottawa | SEWER SERVICE CONNECTIONS FOR RIGID MAIN SEWER PIPE (MODIFIED OPSD-1006.010) | DATE: MARCH 2006 | REV. DATE: MARCH 2014 | DWG. No. S11



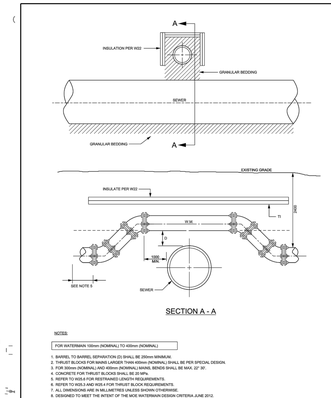

NOTES:
1. ALL DIAMETERS OF SERVICE CONNECTIONS TO FLEXIBLE MAIN SEWER SHALL BE MADE USING APPROVED TEE OR WYE FITTINGS.
2. BAND CLAMP SERVICES TO BE 100mm AND STORM SERVICES TO BE 150mm FOR NEW RESIDENCES UNLESS SPECIFIED OTHERWISE. SERVICE PIPE AND FITTINGS MUST BE THE APPROVED CSA STYLE, SDR26 PRODUCTS UNLESS SPECIFIED OTHERWISE.
3. APPROVED CONTROLLED SETTLEMENT JOINTS OPTIONAL FOR SERVICE CONNECTIONS TO MAIN SEWERS UP TO 5m DEEP. WHERE APPROVED CONNECTIONS TO SEWERS OVER 5m DEEP REQUIRE APPROVED CONTROLLED SETTLEMENT JOINTS.
4. CAP OR PLUG AT THE PROPERTY LINE SHALL BE ADEQUATELY BRACED TO WITHSTAND TESTING PRESSURE.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

Ottawa | SEWER SERVICE CONNECTIONS FOR FLEXIBLE MAIN SEWER PIPE (MODIFIED OPSD-1006.020) | DATE: MARCH 2006 | REV. DATE: MARCH 2013 | DWG. No.: S11.1




NOTES:
1. CLAY SEAL TO EXTEND FROM BOTTOM OF TRENCH EXCAVATION TO UNDERSIDE OF ROAD STRUCTURE.
2. CLAY SEAL TO EXTEND FULL TRENCH WIDTH TO EXISTING NATIVE SOILS WITH A MINIMUM THICKNESS OF 1.0m ALONG PIPES.
3. CLAY SEAL TO BE LOCATED SO THAT NO PIPE JOINTS ARE WITHIN THE CLAY SEAL MATERIAL.

Ottawa | CLAY SEAL FOR PIPE TRENCHES | DATE: MAY 2001 | REV. DATE: MARCH 2008 | DWG. No.: S8



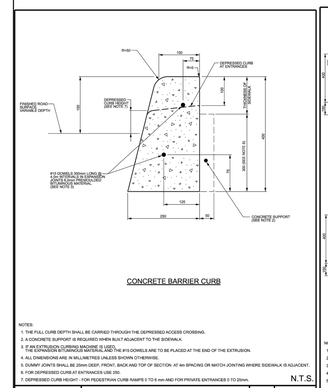

SECTION A - A

NOTES:

| FOR WATERMAIN 100mm (NOMINAL) TO 400mm (NOMINAL) |
|---|

1. BARREL TO BARREL SEPARATION (S) SHALL BE 200mm MINIMUM.
2. THRUST BLOCKS FOR MAINS LARGER THAN 400mm (NOMINAL) SHALL BE PER SPECIAL DESIGN.
3. FOR 300mm (NOMINAL) AND 400mm (NOMINAL) MAINS, BENDS SHALL BE MIX. 22.5°, 30°.
4. CONCRETE FOR THRUST BLOCKS SHALL BE 20 MPa.
5. THRUST BLOCKS SHALL BE PLACED IN ACCORDANCE WITH REQUIREMENTS.
6. REFER TO W23.1 AND W23.2 FOR THRUST BLOCK REQUIREMENTS.
7. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
8. DESIGNED TO MEET THE INTENT OF THE MOE WATERMAIN DESIGN CRITERIA JUNE 2012.

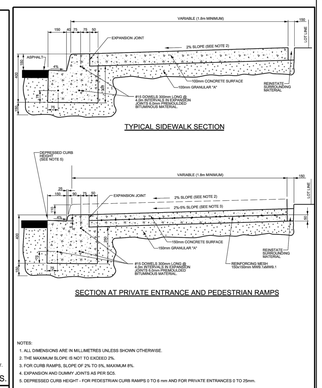
Ottawa | WATERMAIN CROSSING OVER SEWER | DATE: MAY 2001 | REV. DATE: MARCH 2013 | DWG. No.: W25.2




NOTES:
1. THE FULL CURB DEPTH SHALL BE CARRIED THROUGH THE DEPRESSED ACCESS CROSSING.
2. A CONCRETE SUPPORT IS REQUIRED WHEN BUILT ADJACENT TO THE SIDEWALK.
3. IF AN EXTRUSION CURBING MACHINE IS USED,
   THE EXPANSION BITUMINOUS MATERIAL AND THE #15 DOWELS ARE TO BE PLACED AT THE END OF THE EXTRUSION.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
5. DUMMY JOINTS SHALL BE 25mm DEEP, FRONT, BACK AND TOP OF SECTION. AT 4m SPACING OR MATCH JOINTING WHERE SIDEWALK IS ADJACENT.
6. FOR DEPRESSED CURB ENTRANCES USE 250.
7. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 5 TO 6 mm AND FOR PRIVATE ENTRANCES 5 TO 25mm.

N.T.S.

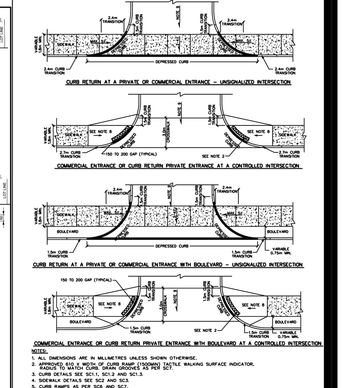
Ottawa | CONCRETE BARRIER CURB FOR GRANULAR BASE PAVEMENT (MODIFIED OPSD-600.110) | DATE: JANUARY 2003 | REV. DATE: MARCH 2016 | DWG. No.: SC1.1




NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. THE MAXIMUM SLOPE IS NOT TO EXCEED 2%.
3. FOR CURB RAMPS, SLOPE OF 2% TO 5%, MAXIMUM 8%.
4. EXPANSION AND DUMMY JOINTS AS PER SC5.
5. DEPRESSED CURB HEIGHT - FOR PEDESTRIAN CURB RAMPS 5 TO 6 mm AND FOR PRIVATE ENTRANCES 5 TO 25mm.

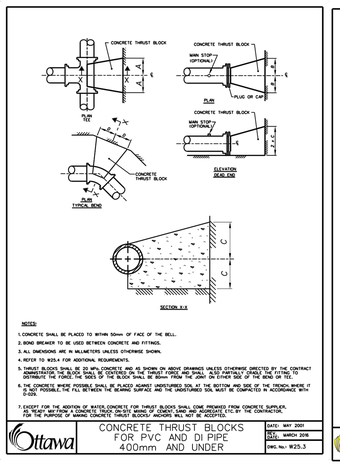
N.T.S.

Ottawa | CONCRETE CURB AND SIDEWALK | DATE: MAY 2001 | REV. DATE: MARCH 2016 | DWG. No.: SC3



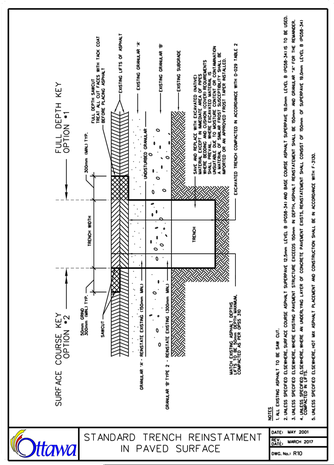

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.
2. APPROVED EIG A WIDTH OF CURB RAMP (1500MM) TACTILE WALKING SURFACE INDICATOR. RADIUS TO MATCH CURB RADIUS, RADIUS AS PER SC2.
3. CURB DETAILS SEE SC1.1, SC1.2 AND SC1.3.
4. SIDEWALK DETAILS SEE SC2 AND SC3.
5. CURB RAMPS AS PER SC5 AND SC7.
6. CONTROLLED MEANS SIGNALIZED OR A 4-WAY STOP INTERSECTION.
7. SUBJECT TO AVOIDANCE OF MEDIANS, CROSSWALK LINES TO BE CENTRED ON THE CURB RAMP.
8. FOR CURB RAMPS, SLOPE OF 2% TO 5%, MAXIMUM 8%.
9. MAXIMUM SLOPE VARIES, SEE PRIVATE APPROACH BYLAW.

Ottawa | CURB RETURN ENTRANCES | DATE: MARCH 2007 | REV. DATE: MARCH 2017 | DWG. No.: SC7.1



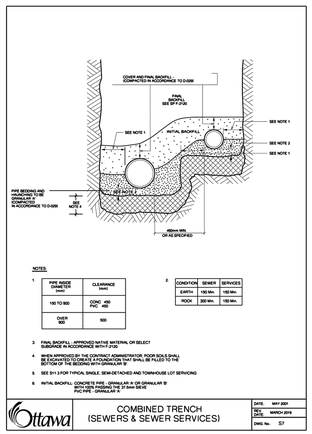

NOTES:
1. CONCRETE SHALL BE PLACED TO WITHIN 50mm OF FACE OF THE BELL.
2. BOND BREAKER TO BE USED BETWEEN CONCRETE AND FITTINGS.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
4. REFER TO W25.4 FOR ADDITIONAL REQUIREMENTS.
5. THRUST BLOCKS SHALL BE 20 MPa CONCRETE AND AS SHOWN ON ABOVE DRAWING UNLESS OTHERWISE DIRECTED BY THE CONTRACT ADMINISTRATOR. THE BLOCK SHALL BE CENTERED ON THE THRUST FORCE AND SHALL ALSO PARTIALLY CONCEAL THE FITTING TO DISTRIBUTE THE FORCE THE SIDES OF THE BLOCK SHALL BE 50mm FROM THE JOINT ON EITHER SIDE OF THE BOND OR TEE.
6. THE CONCRETE WHERE POSSIBLE SHALL BE PLACED AGAINST UNDISTURBED SOIL AT THE BOTTOM AND SIDE OF THE TRENCH. WHERE IT IS NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND THE UNDISTURBED SOIL MUST BE COMPACTED IN ACCORDANCE WITH D-025.
7. EXCEPT FOR THE ADDITION OF WATER CONCRETE FOR THRUST BLOCKS SHALL COME PREMIXED FROM CONCRETE SUPPLIER. FILL REQUIRED MAY BE FROM A CONCRETE TRUCK WASHOUT, OF CLEANED MIXER, OR EQUIVALENT, ETC. BY THE CONTRACTOR, FOR THE PURPOSE OF MIXING CONCRETE FOR THRUST BLOCKS, AT THE DISCRETION OF THE CONTRACTOR.

Ottawa | CONCRETE THRUST BLOCKS FOR PVC AND DI PIPE 400mm AND UNDER | DATE: MAY 2001 | REV. DATE: MARCH 2016 | DWG. No.: W25.3




NOTES:
1. EXISTING ASPHALT TO BE SAW CUT.
2. ALL SITE SPECIFIED ELEVATIONS, SURFACE COURSE ASPHALT SUPERFACE 0.5mm, LESS, 8 HOGS CAT AND BASE COURSE ASPHALT SUPERFACE 0.5mm LESS, 8 HOGS CAT TO BE USED.
3. ALL SITE SPECIFIED ELEVATIONS, SURFACE COURSE ASPHALT SUPERFACE 0.5mm, LESS, 8 HOGS CAT AND BASE COURSE ASPHALT SUPERFACE 0.5mm LESS, 8 HOGS CAT TO BE USED.
4. ALL SITE SPECIFIED ELEVATIONS, WHERE AN UNDERLYING LAYER OF CONCRETE PAVEMENT EXISTS, REINSTATEMENT SHALL CONSIST OF 150mm OF SUPERFACE 50mm, LESS, 8 HOGS CAT.
5. ALL SITE SPECIFIED ELEVATIONS, CAT AND ASPHALT PLACEMENT AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH F-2120.

Ottawa | STANDARD TRENCH REINSTATMENT IN PAVED SURFACE | DATE: MAY 2001 | REV. DATE: MARCH 2017 | DWG. No.: R10



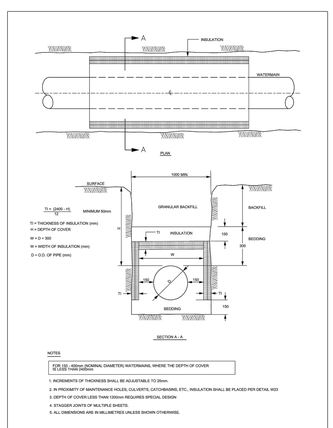

NOTES:

| 1. PIPE WIDE DIAMETER (mm) | CLEARANCE (mm) |
|---|---|
| 150 TO 300 | CONC: 450 PVC: 450 |
| OVER 900 | 600 |

| 2. CONDITION | SEWER | SERVICES |
|---|---|---|
| EARTH | 150 Min | 150 Min |
| ROCK | 300 Min | 150 Min |

3. FINAL BACKFILL - APPROVED NATIVE MATERIAL OR SELECT SUBGRADE IN ACCORDANCE WITH F-2120.
4. WHEN APPROVED BY THE CONTRACT ADMINISTRATOR, FROM SOIL'S (FILL) BE EXCAVATED TO CREATE A FOUNDATION THAT SHALL BE PLUGS TO THE BOTTOM OF THE BEDDING WITH GRANULAR 'B'
5. SEE B11 & FOR TYPICAL SINGLE, SEMI-DETACHED AND TOWNHOUSE LOT SERVICING
6. INITIAL BACKFILL: CONCRETE PIPE - GRANULAR A OR GRANULAR 'B' BOTH SIDES PASSING THE 25 mm SIEVE PVC PIPE - GRANULAR 'A'

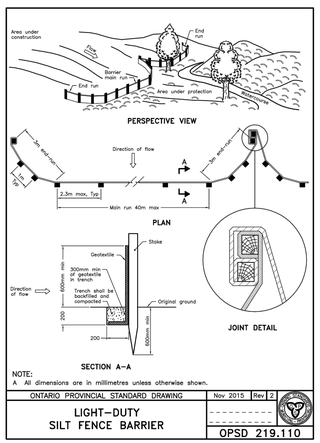
Ottawa | COMBINED TRENCH (SEWERS & SEWER SERVICES) | DATE: MAY 2001 | REV. DATE: MARCH 2019 | DWG. No.: S7




NOTES
FOR 100 - 400mm (NOMINAL DIAMETER) WATERMAINS, WHERE THE DEPTH OF COVER IS LESS THAN 2400mm

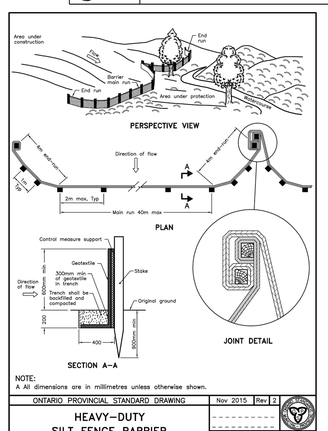
1. INCREMENTS OF THICKNESS SHALL BE ADJUSTABLE TO 25mm.
2. IN PROXIMITY OF MAINTENANCE HOLES, CULVERTS, CATCHBASINS, ETC., INSULATION SHALL BE PLACED PER DETAIL W23
3. DEPTH OF COVER LESS THAN 1200mm REQUIRES SPECIAL DESIGN.
4. STAGGER JOINTS OF MULTIPLE SHEETS.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

Ottawa | THERMAL INSULATION FOR WATERMAINS IN SHALLOW TRENCHES | DATE: MAY 2001 | REV. DATE: MARCH 2013 | DWG. No.: W22



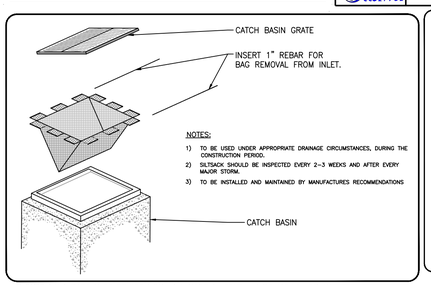

NOTE:
A. All dimensions are in millimetres unless otherwise shown.

| ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2015 | Rev 2 |
|---|---|---|
| LIGHT–DUTY SILT FENCE BARRIER | | OPSD 219.110 |



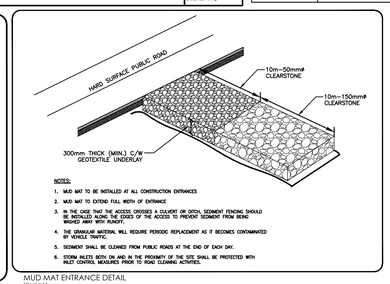

NOTE:
A. All dimensions are in millimetres unless otherwise shown.

| ONTARIO PROVINCIAL STANDARD DRAWING | Nov 2015 | Rev 2 |
|---|---|---|
| HEAVY–DUTY SILT FENCE BARRIER | | OPSD 219.130 |



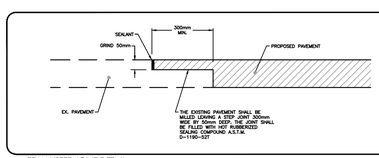

NOTES:
1) TO BE USED UNDER APPROPRIATE DRAINAGE CIRCUMSTANCES, DURING THE CONSTRUCTION PERIOD.
2) SILTSACK SHOULD BE INSPECTED EVERY 2–3 WEEKS AND AFTER EVERY MAJOR STORM.
3) TO BE INSTALLED AND MAINTAINED BY MANUFACTURES RECOMMENDATIONS

ROADSIDE CATCH BASIN PROTECTION DETAIL:TERRAFIX SILTSACK
SCALE:N.T.S.

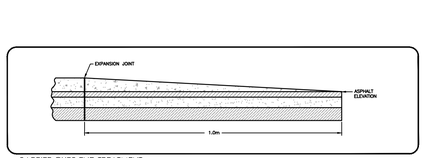



NOTES:
1. MUD MAT TO BE INSTALLED AT ALL CONSTRUCTION ENTRANCES
2. MUD MAT TO EXTEND FULL WIDTH OF ENTRANCE
3. IN THE CASE THAT THE ACCESS CROSSES A CULVERT OR DITCH, SEDIMENT FENCING SHOULD BE INSTALLED ALONG THE EDGES OF THE ACCESS TO PREVENT SEDIMENT FROM BEING WASHED AWAY WITH RUNOFF.
4. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.
5. SEDIMENT SHALL BE CLEANED FROM PUBLIC ROADS AT THE END OF EACH DAY.
6. STORM INLETS BOTH ON AND IN THE PROXIMITY OF THE SITE SHALL BE PROTECTED WITH INLET CONTROL MEASURES PRIOR TO ROAD CLEANING ACTIVITIES.

MUD MAT ENTRANCE DETAIL
SCALE:N.T.S.




MEDIAN/STEP JOINT DETAIL
SCALE:N.T.S.




BARRIER CURB END TREATMENT
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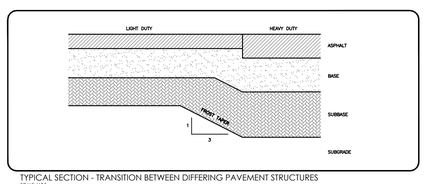


TYPICAL SECTION - TRANSITION BETWEEN DIFFERING PAVEMENT STRUCTURES
SCALE:N.T.S.

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ORIGINAL SHEET - ARCH D


Stantec

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## Legend

- PROPOSED LIGHT DUTY SILT FENCE AS PER OPSD 219.110
- PROPOSED HEAVY DUTY SILT FENCE AS PER OPSD 219.130
- PROPOSED STRAW BALE LOCATION AS PER OPSD 219.100
- PROPOSED MUD MAT LOCATION
- PROPOSED CATCH BASIN PROTECTION AS PER DETAIL.

## Best Management Practices

CONTRACTOR TO PROVIDE EROSION AND SEDIMENT CONTROLS (BEST MANAGEMENT PRACTICES) DURING CONSTRUCTION OF THIS PROJECT.

EROSION MUST BE MINIMIZED AND SEDIMENTS MUST BE REMOVED FROM CONSTRUCTION SITE RUN-OFF IN ORDER TO PROTECT DOWNSTREAM AREAS. DURING ALL CONSTRUCTION, EROSION AND SEDIMENTATION SHOULD BE CONTROLLED BY THE FOLLOWING TECHNIQUES:

1. LIMIT THE EXTENT OF EXPOSED SOILS AT ANY GIVEN TIME.
2. REVEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE.
3. MINIMIZE AREA TO BE CLEARED AND GRUBBED.
4. PROTECT EXPOSED SLOPES WITH PLASTIC OR SYNTHETIC MULCHES.
5. INSTALL FILTER CLOTH BETWEEN FRAME AND COVER ON ALL PROPOSED CATCH BASINS AND CATCH BASIN MANHOLES AND ON ALL EXISTING CATCH BASINS THAT WILL RECEIVE RUN-OFF FROM THE SITE.
6. A SILT FENCE SHALL BE INSTALLED AROUND THE PERIMETER OF ALL AND ANY STOCKPILES OF MATERIAL TO BE USED OR REMOVED FROM SITE. (LOCATION TO BE DETERMINED)
7. A VISUAL INSPECTION SHALL BE DONE DAILY ON SEDIMENT CONTROL MEASURES AND CLEANED OF ANY ACCUMULATED SILT AS REQUIRED. THE DEPOSITS WILL BE DISPOSED OFF SITE AS PER THE REQUIREMENTS OF THE CONTRACT.
8. SEDIMENT CONTROL BARRIERS MAY ONLY BE REMOVED TEMPORARILY WITH APPROVAL OF CONTRACT ADMINISTRATOR TO ACCOMMODATE CONSTRUCTION OPERATIONS. ALL AFFECTED BARRIERS MUST BE REINSTATED AT NIGHT WHEN CONSTRUCTION IS COMPLETED. NO REMOVAL WILL OCCUR IF THERE IS A SIGNIFICANT RAINFALL EVENT ANTICIPATED (>10mm) UNLESS A NEW DEVICE HAS BEEN INSTALLED TO PROTECT THE EXISTING STORM AND SANITARY SEWER SYSTEMS.
9. NO REFUELING OR CLEANING OF EQUIPMENT IS PERMITTED NEAR ANY EXISTING WATERWAY.
10. CONTRACTOR SHALL REMOVE SEDIMENT CONTROL MEASURES WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE(S) IS NO LONGER REQUIRED. NO CONTROL MEASURES SHALL BE PERMANENTLY REMOVED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR.
11. THE CONTRACTOR SHALL PERIODICALLY, OR WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENTS AS REQUIRED.
12. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO THE WATERCOURSE. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.

| | | | |
|---|---|---|---|
| 1 | ISSUED FOR REVIEW | WAJ | AMP | 21.03.25 |
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Permit-Seal

LICENSED PROFESSIONAL ENGINEER
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2021-03-25
PROVINCE OF ONTARIO

Client/Project
RICHCRAFT GROUP OF COMPANIES

KANATA WEST BLOCK 29

OTTAWA, ON

Title
EROSION CONTROL PLAN AND DETAIL SHEET

| Project No. | Scale | |
|---|---|---|
| 160401608 | AS NOTED | |
| Drawing No. | Sheet | Revision |
| ECDS-1 | 4 of 6 | 1 |