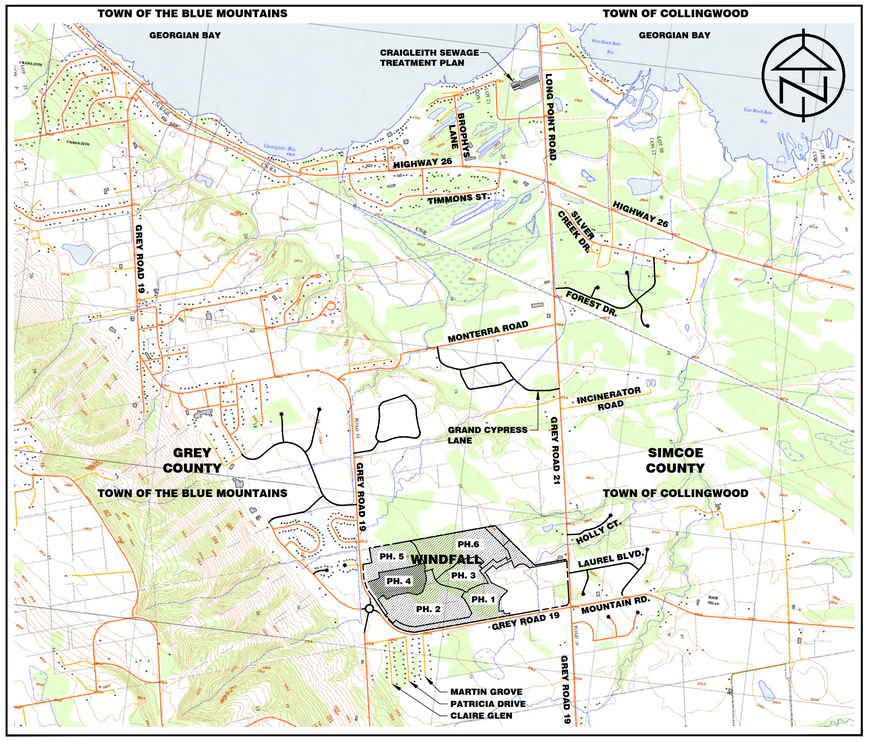
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS



KEY PLAN

This Drawing is For
INFORMATION ONLY
This Drawing should not be redistributed beyond the intended recipient

TATHAM ENGINEERING

[redacted]

10/30/2019

FOURTH SUBMISSION
Contract No. 111179-4

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LEGEND

PROPERTY LINE
EXISTING CENTERLINE
PROPOSED CENTRELINE
EXISTING EDGE OF ASPHALT
PROPOSED EDGE OF ASPHALT
EXISTING EDGE OF SHOULDER
PROPOSED EDGE OF SHOULDER
EXISTING DITCH/DIRECTION OF FLOW
PROPOSED DITCH/DIRECTION OF FLOW
EXISTING SANITARY SEWER/SIZE/DIRECTION OF FLOW — 200ø SAN
PROPOSED SANITARY SEWER/SIZE/DIRECTION OF FLOW — 200ø SAN
EXISTING SANITARY SERVICE
PROPOSED SANITARY SERVICE
EXISTING SANITARY FORCEMAIN/SIZE/DIRECTION OF FLOW — 200ø SAN. F/M
EXISTING WATERMAIN/SIZE — 150ø W/M
PROPOSED WATERMAIN/SIZE — 150ø W/M
EXISTING WATER SERVICE
PROPOSED WATER SERVICE
EXISTING STORM SEWER/SIZE/DIRECTION OF FLOW — 375ø STM
PROPOSED STORM SEWER/SIZE/DIRECTION OF FLOW — 375ø STM
EXISTING STORM SERVICE
PROPOSED STORM SERVICE
EXISTING CULVERT
PROPOSED CULVERT
PROPOSED SWALE LOCATION
PROPOSED JOINT HYDRO, BELL AND ROGERS
EXISTING GAS MAIN
PROPOSED GAS MAIN
EXISITNG FENCELINE
PROPOSED FENCELINE
EXISTING BUSHLINE
EXISTING CONTOUR — 179.00
EXISTING SPOT ELEVATION × 179.00
PROPOSED SPOT ELEVATION ×179.00
EXISTING GRADING DIRECTION
PROPOSED GRADING DIRECTION
PROPOSED REAR YARD OVERFLOW ROUTE
PROPOSED SWALE LOCATION
EXISTING TEMPORARY BENCHMARK — TBM
EXISTING STANDARD IRON BAR — SIB
EXISTING BOREHOLE/NUMBER — BH9
EXISTING HYDRO TRANSFORMER
EXISTING CABLE PEDESTAL
EXISTING BELL PEDESTAL
EXISTING BELL MAINTENANCE HOLE — BELL MH
EXISTING BELL POLE — BP
EXISTING HYDRO POLE — HP
EXISTING HYDRO GUY WIRE
PROPOSED LIGHT STANDARD — LS
EXISTING TRAFFIC SIGN — TS
PROPOSED TRAFFIC SIGN — TS
PROPOSED STOP SIGN — STOP SIGN
PROPOSED STREET NAME SIGN — STREET NAME SIGN
EXISTING DECIDUOUS TREE
EXISTING CONIFEROUS TREE
EXISTING SANITARY MAINTENANCE HOLE/NUMBER — SAN MH17
PROPOSED SANITARY MAINTENANCE HOLE/NUMBER — SAN MH17
EXISTING HYDRANT AND VALVE — HYD & WV
PROPOSED HYDRANT AND VALVE — HYD & WV
EXISTING WATER VALVE — WV
PROPOSED WATER VALVE — WV
PROPOSED CURB STOP VALVE
EXISTING BLOW-OFF — BLOWOFF
PROPOSED BLOW-OFF — BLOWOFF
EXISTING WM. AUTOFLUSHER
PROPOSED WM. AUTOFLUSHER
EXISTING WATERMAIN TERMINATION POINT
PROPOSED WATERMAIN TERMINATION POINT
EXISTING STORM MAINTENANCE HOLE — STM MH20
PROPOSED STORM MAINTENANCE HOLE/NUMBER — STM MH9
EXISTING CATCH BASIN — CBMH 18
PROPOSED CATCH BASIN — CB
PROPOSED CATCH BASIN MAINTENANCE HOLE/NUMBER — CBMH12
PROPOSED DOUBLE CATCH BASIN MAINTENANCE HOLE/NUMBER — DCBMH4
PROPOSED DOUBLE CATCH BASIN — DCB
PROPOSED DITCH INLET CATCH BASIN — DICB
PROPOSED RIP-RAP
HATCHED AREAS ARE NOT TO BE INCLUDED IN PHASE 4 WORKS

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
2.	2ND SUBMISSION	JUNE 14/19
3.	3RD SUBMISSION	JULY 30/19
4.	4TH SUBMISSION	OCT 10/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

DRAWING INDEX AND LEGEND

TATHAM ENGINEERING

IN-1

NTS

Drawing Name: 111179-4-IN01.dwg, Plotted: Oct 11, 2019

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-47, DATED JANUARY 7, 2016 AND PLAN 16M-52, DATED MAY 11, 2017 AND PLAN 16M-57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-64, DATED JANUARY 22, 2019.

PHASE 4 LOT NUMBERS IN ACCORDANCE WITH DRAFT M-PLAN.

ALL OTHER LOT NUMBERS (PHASE 5 TO PHASE 6) IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED OCTOBER 30, 2018.

THE LINES SHOWN DIVIDING THE SEMI-DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

LEGEND

- PHASE/SUBPHASE (2B)
- SEMI-DETACHED UNIT
- PHASE 1/2 SERVICING EASEMENT
- PHASE 4 SERVICING EASEMENT

SECOND NATURE (PROPOSED DEVELOPMENT)

SECOND NATURE (PROPOSED DEVELOPMENT)

WALKWAY

NEDERAND (VACANT)

NEDERAND (VACANT)

EXISTING RESIDENTIAL

GREY ROAD 19

EX. RES.

EX. RES.

KINSEY PLACE

BLACK WILLOW CRESCENT

COURTLAND STREET

PHASE 2 SERVICING EASEMENT

BLOCK 44 (LANDSCAPE BUFFER)

BLOCK 42 (COMMUNITY FOREST PARK)

PHASE 4 SERVICING EASEMENT

BLOCK 45 (LANDSCAPE BUFFER)

CHESTNUT STREET

SUGAR MAPLE STREET

SUGAR MAPLE STREET

RED PINE STREET

WHITE OAK STREET

BLOCK 47 (NEIGHBOURHOOD PARK)

BLOCK 48 (NEIGHBOURHOOD PARK)

SNOW APPLE CRESCENT

STORM WATER MANAGEMENT FACILITY STAGE 2 EXPANSION (PHASE 3) (SEE NOTE)

STORM WATER MANAGEMENT FACILITY STAGE 1 (PHASE 1)

LE SCANDINAVE SPA

GREY ROAD 21

HOLLY COURT

EX. RESIDENTIAL

BLOCK 41 (STORM WATER MANAGEMENT FACILITY)

PART 2,3,4, 16R-10103 (TOWN OWNED)

(PHASE 1) BLOCK 64 (SANITARY SEWER)

BLOCK 60 (PRIVATE RECREATION)

WALKWAY

BLOCK 65 (ROAD WIDENING)

BLUE MOUNTAIN RESORTS EX. PARKING LOT

BLOCK 55 (LANDSCAPE BUFFER)

SYCAMORE STREET

COURTLAND STREET

BLOCK 43 (NEIGHBOURHOOD PARK)

BLOCK 56 (NEIGHBOURHOOD PARK)

BLOCK 39

CROSSWINDS BLVD.

YELLOW BIRCH CRESCENT

YELLOW BIRCH CRESCENT

PHASE 1 SERVICING EASEMENT

PHASE 1 SERVICING EASEMENT

LAUREL BLVD.

GORD CANNING DRIVE

PART 1, 16R-10497

BLOCK 54 (EMERGENCY ACCESS)

BLUE MOUNTAIN RESORTS EX. PARKING LOT

BLOCK 62

BLOCK 61

BLOCK 50 (ENVIRONMENTAL BUFFER)

BLOCK 38

BLOCK 57 (ENVIRONMENTAL PROTECTION)

BLOCK 58 (ADDITIONAL LANDS OWNED BY THE APPLICANT)

AMPHIBIAN POND (PHASE 1)

BLOCK 51 (ENVIRONMENTAL BUFFER)

BLOCK 52 (LANDSCAPE BUFFER)

BLOCK 53 (ENTRY FEATURE)

GREY ROAD 21

EX. RESIDENTIAL

GREY ROAD 19

GREY ROAD 19

BLUE MOUNTAIN ROAD

SCENIC CAVES ROAD

CLAIRE GLEN

PATRICIA DRIVE

MARTIN GROVE

HYDRO ONE

EX. RESIDENTIAL

BLOCK 46 (LANDSCAPE BUFFER)

BLOCK 63

BELL

EX. RES.

BLOCK 59

BLOCK 49 (LANDSCAPE BUFFER)

EX. RESIDENTIAL

TEE'S PLEASE DRIVING RANGE

PHASE	ESTIMATED START DATE FOR SERVICING	ESTIMATED START DATE FOR HOUSES
1	COMPLETE	COMPLETE
2A	COMPLETE	COMPLETE
2B	COMPLETE	COMPLETE
2C	COMPLETE	IN PROGRESS
3	COMPLETE	DEC. 2018
4A	JULY 2019	NOV. 2019
4B	JULY 2019	2020
5A	TBD	TBD
5B	TBD	TBD
6A	TBD	TBD
6B	TBD	TBD

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

PHASING PLAN

TATHAM ENGINEERING

PH-1

1 : 2000

Drawing Name: 111179-4-PH01.dwg, Plotted: Oct 11, 2019

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

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NOTES

1. SEE DRAWINGS UT-1 TO UT-2 FOR COMPOSITE UTILITY DETAILS.
2. SEE DRAWINGS ___ TO ___ FOR ELECTRICAL AND STREETLIGHTING DETAILS.
3. SEE DRAWINGS SC-1 AND SC-2 FOR SILTATION & EROSION CONTROL PLAN.
4. SEE DRAWING SC-3 FOR SILTATION & EROSION CONTROL DETAILS.
5. SEE DRAWINGS DE-1 TO DE-3 FOR DETAILS AND NOTES.
6. SEE DRAWINGS SAN-1, SAN-2 AND DE-2 FOR SANITARY SEWER DESIGN.
7. SEE DRAWINGS STM-2 AND DE-2 FOR STORM SEWER DESIGN.
8. SEE DRAWING WAT-2 FOR WATERMAIN DESIGN.
9. SEE DRAWINGS PM-1 & PM-3 FOR PAVEMENT MARKINGS AND SIGNAGE PLAN.
10. SEE DRAWINGS _____ AND _____ FOR LANDSCAPE PLAN AND DETAILS.
11. SEE DRAWING CG-1 FOR CLEARING AND GRUBBING DETAILS.

SECOND NATURE (PROPOSED DEVELOPMENT)
SECOND NATURE (PROPOSED DEVELOPMENT)
DC-1
NEDERAND (VACANT)
NEDERAND (VACANT)
EXISTING RESIDENTIAL
EX. RES.
EX. RES.
GREY ROAD 19
KINSEY PLACE
BLACK WILLOW STREET
COURTLAND STREET
WALKWAY
SYCAMORE STREET
COURTLAND STREET
BLOCK 42 (COMMUNITY FOREST PARK)
SEE PHASE 2C DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-2C
CROSSWINDS BLVD.
BLOCK 46
WALKWAY
CHESTNUT STREET
CHESTNUT STREET
SUGAR MAPLE STREET
SUGAR MAPLE STREET
SUGAR MAPLE STREET
RED PINE STREET
RED PINE STREET
WHITE OAK STREET
BLOCK 47 (NWOOD PARK)
BLOCK 48 (NEIGHBOURHOOD PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
YELLOW BIRCH CRESCENT
YELLOW BIRCH CRESCENT
YELLOW BIRCH CRES.
CROSSWINDS BLVD.
BLOCK 46
BLOCK 63
SNOW APPLE CRES.
BLOCK 49
BLOCK 59
BLOCK 57
AMPHIBIAN POND
BLOCK 58 (ADDITIONAL LANDS OWNED BY THE APPLICANT)
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
BLOCK 60 (PRIVATE RECREATION)
LE SCANDINAVE SPA
LE SCANDINAVE SPA
LE SCANDINAVE SPA
HOLLY COURT
EX. RESIDENTIAL
PART 2,3,4, 16R-10103 (TOWN OWNED)
BLOCK 64 (SANITARY SEWER)
LAUREL BLVD.
EX. RESIDENTIAL
GREY ROAD 21 (OSLER BLUFF ROAD)
BLOCK 53 (ENTRY FEATURE)
BLUE MOUNTAIN RESORTS EX. PARKING LOT
GORD CANNING DRIVE
BLOCK 55 (LANDSCAPE BUFFER)
BLOCK 55 (ROAD WIDENING)
PART 1, 16R-10497
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 44 (EMERGENCY ACCESS)
BLOCK 61
BLOCK 62
BLUE MOUNTAIN RESORTS EX. PARKING LOT
SEE PHASE 2C DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-2C
SEE PHASE 3 DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-3
SEE PHASE 1 DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-1B
SEE PHASE 2B DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-2B
SEE PHASE 2A DRAWINGS FOR ADDITIONAL INFORMATION. CCTA DRAWING SET # 111179-2A
BLOCK 50 (ENVIRONMENTAL BUFFER)
BLOCK 50 (ROAD WIDENING)
BLOCK 51 (ENVIRONMENTAL BUFFER)
BLOCK 51 (ROAD WIDENING)
BLOCK 52 (LANDSCAPE BUFFER)
BLOCK 52 (ROAD WIDENING)
BLUE MOUNTAIN ROAD
GREY ROAD 19
GREY ROAD 19
SCENIC CAVES ROAD
CLAIRE GLEN
PATRICIA DRIVE
MARTIN GROVE
HYDRO ONE
EX. RESIDENTIAL
BELL
EX. RESIDENTIAL
EX. RESIDENTIAL
TEE'S PLEASE DRIVING RANGE

LEGEND
- PHASE 1/2/3 SERVICING AREA
- PHASE 2C EMERGENCY ACCESS
- PHASE 4 SERVICING AREA

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

ORIENTATION PLAN

TATHAM ENGINEERING

OR-1

1 : 2000

Drawing Name: 111179-4-OR1.dwg, Plotted: Oct 11, 2019

SECOND NATURE
(PROPOSED DEVELOPMENT)

NEDERAND (VACANT)

HEAVY DUTY SILT FENCE

MATCH TO EXISTING SILT FENCE

RCD

BLOCK 44 (LANDSCAPE BUFFER)

BLOCK 42
(COMMUNITY FOREST PARK)

BLOCK 66

CHESTNUT STREET

SUGAR MAPLE STREET

WHITE OAK STREET

SNOW APPLE CRESCENT

CROSSWINDS BLVD.

BLOCK 47
(NEIGHBOURHOOD PARK)

BLOCK 48
(NEIGHBOURHOOD PARK)

BLOCK 60 (PRIVATE RECREATION)

BLOCK 41
(STORM WATER MANAGEMENT FACILITY)

CB 431
DCB 429
CBMH 430
DCBMH 429
CBMH 428
CBMH 427
CBMH 426
CB 425
CBMH 425
DCBMH 424
DCB 424
CBMH 423
CB 422
CBMH 422
DCB 403
DCBMH 403
CB 404
CB 405
DCBMH 407
CBMH 406
CBMH 405
CBMH 404
CBMH 409
CBMH 410
CBMH 411
CB 411
CB 413
CBMH 412
CB 414
CBMH 413
CBMH 414
STM MH 415
DICB 414
DCBMH 414
STM MH 416
STM MH 417
STM MH 418
DICB 417
DCBMH 600
CBMH 601
DCB 600
CBMH 608
DCBMH 607
STM MH 502
DICB 414
DCBMH 512
DCB 512
CBMH 513
CBMH 514
CB 515
CBMH 515
CBMH 516
CBMH 402
DCBMH 401
CB 106
DCBMH 421
STM MH 431
STM MH 433
DCB 407
DCBMH 408
DCB 408
CB 432

TEMPORARY STOCKPILE LOCATION FOR EXCESS TOPSOIL

TEMPORARY STOCKPILE LOCATION FOR EXCESS FILL

REMOVE EXISTING TURNING CIRCLE

REMOVE EXISTING 400ø CULVERT

STONE MUD MAT (PHASE 4)

EXISTING HEAVY DUTY SILT FENCE TO REMAIN

EXISTING CONSTRUCTION ROAD ACCESS TO REMAIN

EXISTING GRAVEL PARKING AREA TO REMAIN

TREE PROTECTION TYPE 'B'

KEY PLAN

LEGEND

EXISTING CONTOURS	185.0
LIMIT OF CLEARING & GRUBBING	
EXISTING HEAVY DUTY SILT FENCE	
PROPOSED HEAVY DUTY SILT FENCE	
PROPOSED ROCK FLOW CHECK DAM	RFCD
PROPOSED STRAW BALE FLOW CHECK DAM	SBFC
EXISTING OVERLAND FLOW	
PROPOSED OVERLAND FLOW	
EX. CONST. ACCESS ROAD TO BE REMOVED	
PROPOSED CONSTRUCTION ACCESS ROAD	
HATCHED AREAS ARE NOT TO BE INCLUDED IN PHASE 4 WORKS	

SEE SHEET SC-3 FOR SILTATION CONTROL DETAILS AND NOTES

SEE SHEET CG-1 FOR CLEARING AND GRUBBING INFORMATION

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Drawing Name: 111179-4-SC01.dwg, Plotted: Oct 11, 2019

BENCHMARKS

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CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

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ENGINEER STAMP [redacted]

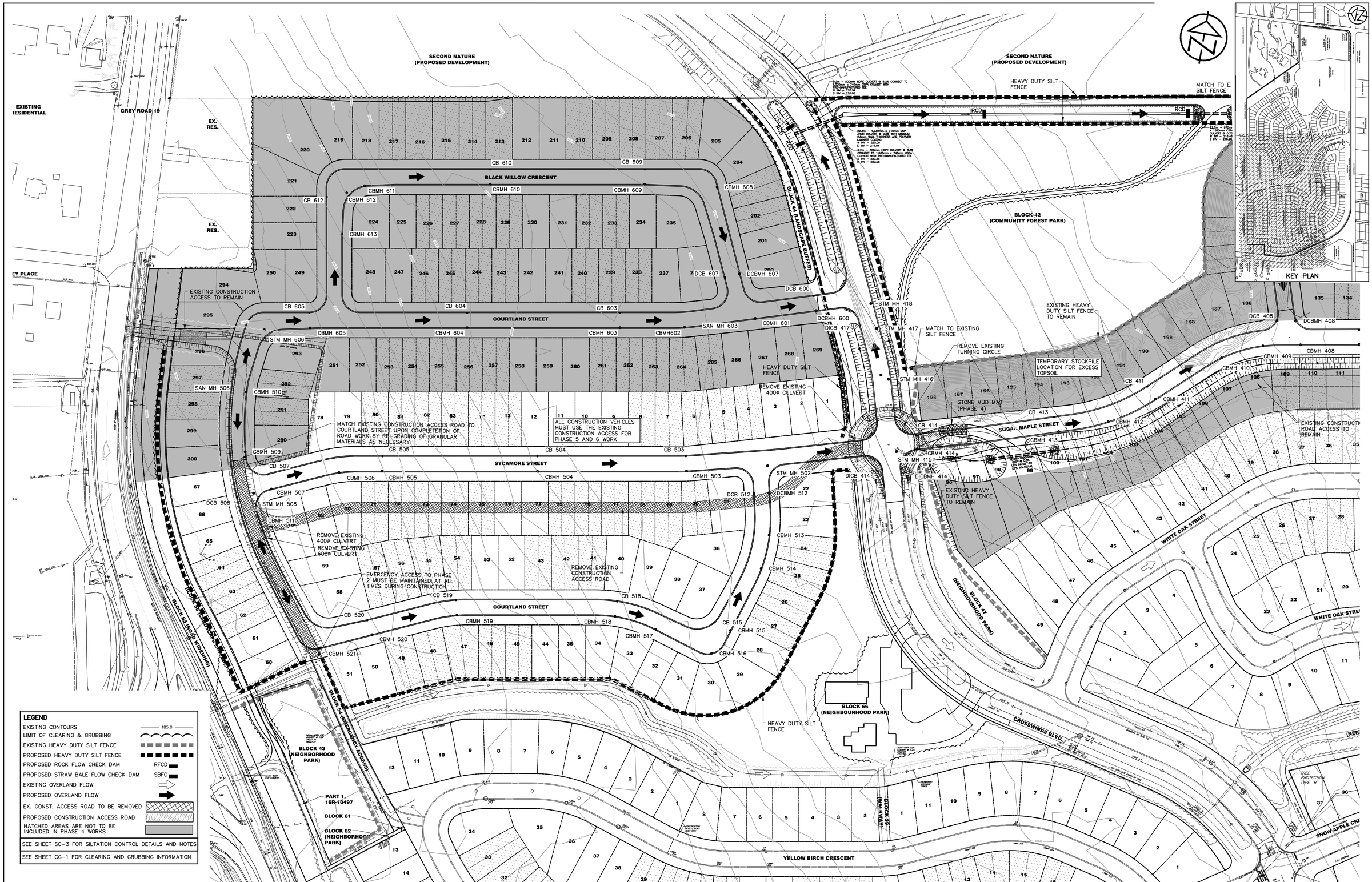
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

SILTATION AND EROSION CONTROL AND REMOVALS PLAN

TATHAM ENGINEERING

SC-1

1 : 1000



LEGEND

- EXISTING CONTOURS — 185.0
- LIMIT OF CLEARING & GRUBBING
- EXISTING HEAVY DUTY SILT FENCE
- PROPOSED HEAVY DUTY SILT FENCE
- PROPOSED ROCK FLOW CHECK DAM — RFCD
- PROPOSED STRAW BALE FLOW CHECK DAM — SBFC
- EXISTING OVERLAND FLOW
- PROPOSED OVERLAND FLOW
- EX. CONST. ACCESS ROAD TO BE REMOVED
- PROPOSED CONSTRUCTION ACCESS ROAD
- HATCHED AREAS ARE NOT TO BE INCLUDED IN PHASE 4 WORKS

SEE SHEET SC-3 FOR SILTATION CONTROL DETAILS AND NOTES

SEE SHEET CG-1 FOR CLEARING AND GRUBBING INFORMATION

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
2.	2ND SUBMISSION	JUNE 14/19
3.	3RD SUBMISSION	JULY 30/19
4.	4TH SUBMISSION	OCT 10/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

SILTATION AND EROSION CONTROL AND REMOVALS PLAN

TATHAM ENGINEERING

SC-2

1 : 1000

Drawing Name: 111179-4-SC01.dwg, Plotted: Oct 11, 2019

NOTES

A. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SEDIMENT AND EROSION CONTROL MEASURES THAT ARE DESIGNED TO CONTROL RUNOFF FROM SPECIFIC AREAS MUST BE INSTALLED PRIOR TO ANY DISTURBANCE OF THAT PART OF THE SITE. THE LOCATION OF ALL SILTATION AND EROSION CONTROL WORKS TO BE REVIEWED ON SITE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER.

B. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES MUST BE PRESENTED IN WRITING TO THE ENGINEER FOR APPROVAL OF THE TOWN AND NOTTAWASAGA VALLEY CONSERVATION AUTHORITY.

C. THE CONTRACTOR SHALL HAVE MATERIALS AVAILABLE ON-SITE TO REPAIR SEDIMENT AND EROSION CONTROL MEASURES IN THE EVENT OF UNFORESEEN CONDITIONS SUCH AS HIGH WATER, EXTREME RAINFALL EVENTS, ETC.

D. ALL EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED, CLEANED AND MAINTAINED BY THE CONTRACTOR AFTER EACH STORM EVENT. ALL WORKS WILL BE INSPECTED BY THE ENGINEER BI-WEEKLY AND AFTER EACH MAJOR STORM EVENT.

E. CONSTRUCTION OF ALL SILTATION AND EROSION CONTROL WORKS ARE TO BE IN ACCORDANCE WITH THE FOLLOWING STEPS:

1. INSTALL NEW OR MAINTAIN EXISTING STONE MUD MAT AS PER DETAIL.
2. INSTALL SILT FENCE AS PER NOTTAWASAGA VALLEY CONSERVATION AUTHORITY DRAWING BSD-23 DRAFT.
3. INSTALL ROCK FLOW CHECK DAMS AS PER OPSD 219.211.
4. INSTALL STRAW BALE FLOW CHECKS AS PER OPSD 219.180.
5. INSTALL TEMPORARY CATCH BASIN SEDIMENT TRAPS ON ALL NEW AND EXISTING CATCH BASINS. SEDIMENT TRAPS TO BE RECTANGULAR CBST BY LAYFIELD OR APPROVED EQUAL. ALL CATCH BASINS TO REMAIN SCREENED UNTIL BASE COURSE ASPHALT IS PLACED AND LOT GRADING IS COMPLETE.

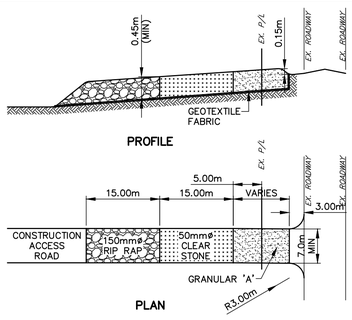
G. ALL CONSTRUCTION VEHICLES TO ACCESS SITE USING THE DESIGNATED CONSTRUCTION ACCESS POINTS.

H. EROSION AND SEDIMENT CONTROL MEASURES TO BE REMOVED BY THE CONTRACTOR ONCE GROUND COVER IS ESTABLISHED AND LANDSCAPING IS COMPLETE AND APPROVED BY THE ENGINEER.

I. STOCKPILE LOCATIONS ARE TO BE APPROVED BY THE ENGINEER.

J. PROVIDE FENCE OR APPROVED EQUAL ACROSS ALL CONSTRUCTION ACCESSES DURING PERIODS OF INACTIVITY.

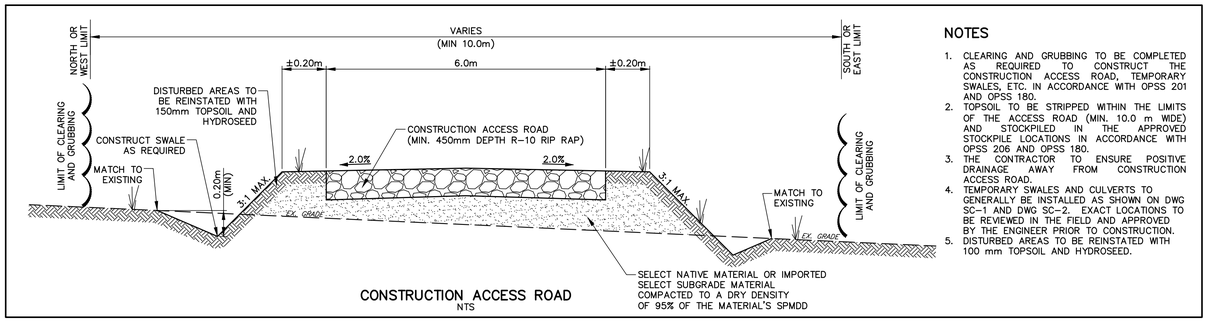
K. CONSTRUCTION AREAS THAT EXCEED 30 DAYS OF INACTIVITY SHALL BE STABILIZED BY SEEDING IN ACCORDANCE WITH THE NOTTAWASAGA VALLEY CONSERVATION AUTHORITY'S TECHNICAL DESIGN GUIDELINES, STANDARDS AND POLICIES FOR SILTATION AND EROSION CONTROL, CONSTRUCTION CONTROL REQUIREMENTS, NOTES 1, 2 AND 3 AND/OR AS DIRECTED BY THE TOWN. THIS IS TO INCLUDE STOCKPILES OF FILL AND TOPSOIL.



NOTES

1. STONE SIZE – THE STONE PAD SHALL BE A MIN. 450 mm THICK. USE GRANULAR 'A' FOR THE FIRST 5 m FROM THE PROPERTY LINE, 50 mm ø CLEAR STONE FOR NEXT 15 m AND 150 mm ø RIP RAP FOR THE REMAINING 15 m.
2. LENGTH – AS REQUIRED BUT NOT LESS THAN 35 m.
3. WIDTH – 7.0 m MIN. BUT NOT LESS THAN THE WIDTH AT POINTS WHERE INGRESS AND EGRESS OCCURS.
4. GEOTEXTILE FABRIC – TERRAFIX 270R OR APPROVED EQUAL TO BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIRECTED TOWARD CONSTRUCTION ACCESS SHALL BE DIRECTED ACROSS THE ACCESS THROUGH A TEMPORARY CULVERT,
6. MAINTENANCE – THE CONTRACTOR SHALL MAINTAIN THE MUD MAT IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.
7. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ACCESS ONTO THE PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
8. INSPECTION & MAINTENANCE – REQUIRED MAINTENANCE AFTER EACH RAIN EVENT SHALL BE PROVIDED BY THE CONTRACTOR.
9. REMOVAL – STONE MUD MAT TO REMAIN IN PLACE UNTIL COMMENCEMENT OF ROAD CONSTRUCTION

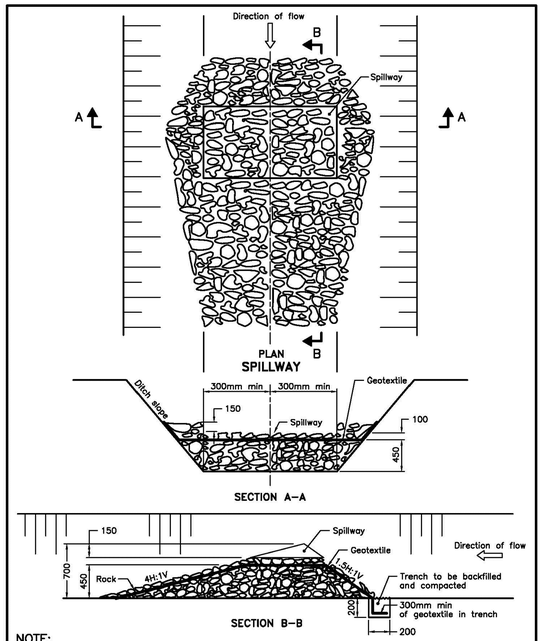
STONE MUD MAT DETAIL
NTS



CONSTRUCTION ACCESS ROAD
NTS

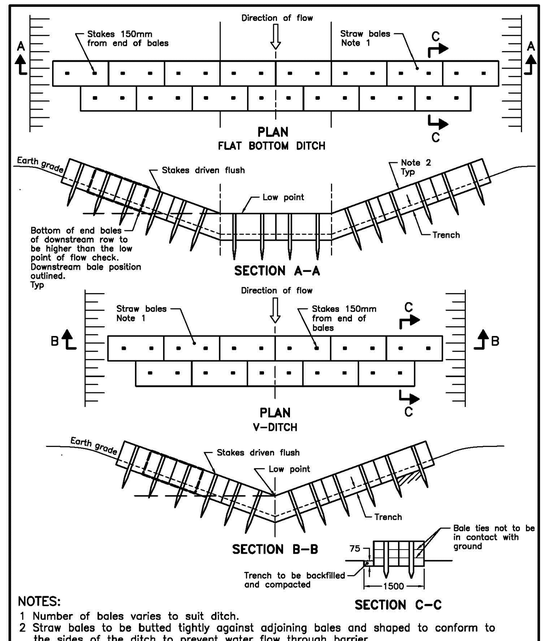
NOTES

1. CLEARING AND GRUBBING TO BE COMPLETED AS REQUIRED TO CONSTRUCT THE CONSTRUCTION ACCESS ROAD, TEMPORARY SWALES, ETC. IN ACCORDANCE WITH OPSS 201 AND OPSS 180.
2. TOPSOIL TO BE STRIPPED WITHIN THE LIMITS OF THE ACCESS ROAD (MIN. 10.0 m WIDE) AND STOCKPILED IN THE APPROVED STOCKPILE LOCATIONS IN ACCORDANCE WITH OPSS 206 AND OPSS 180.
3. THE CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM CONSTRUCTION ACCESS ROAD.
4. TEMPORARY SWALES AND CULVERTS TO GENERALLY BE INSTALLED AS SHOWN ON DWG SC-1 AND DWG SC-2. EXACT LOCATIONS TO BE REVIEWED IN THE FIELD AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
5. DISTURBED AREAS TO BE REINSTATED WITH 100 mm TOPSOIL AND HYDROSEED.



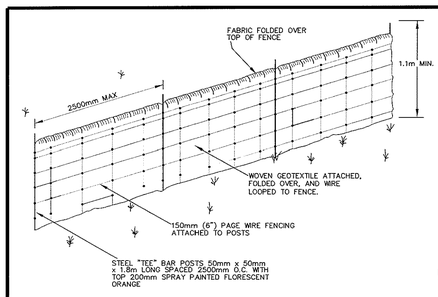
NOTE:
A All dimensions are in millimetres unless otherwise shown.

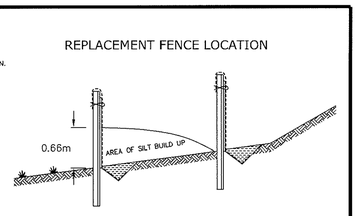
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev	1
ROCK FLOW CHECK DAM FLAT BOTTOM DITCH			OPSD 219.211

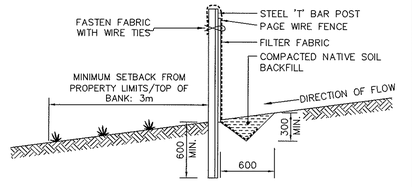


NOTES:
1 Number of bales varies to suit ditch.
2 Straw bales to be butted tightly against adjoining bales and shaped to conform to the sides of the ditch to prevent water flow through barrier.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2006	Rev	1
STRAW BALE FLOW CHECK DAM			OPSD 219.180







NOTES:
1. SILT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
2. SILT/SEDIMENT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTO DRAINAGE MANUAL VOLUME 2 "CHART F4-3C TOPOGRAPHIC FACTOR LS BASED ON SLOPE LENGTH AND GRADIENT."
3. SILT/SEDIMENT CONTROL FENCE SHALL BE INSTALLED WITH FILTER MEDIA FABRIC TOED INTO THE SOIL A MIN. OF 300mm BY EITHER STATIC SLICING OR TRENCH METHODS WITH COMPACTION OF TRENCH MATERIAL MEETING 95% INSITU SOIL STRENGTH.
4. STEEL 'T' BAR POSTS ARE TO BE SPACED MAX. 2500mm ON CENTER.
5. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE.
6. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
7. GEOTEXTILE FABRIC TO BE COMPRISED OF WOVEN OR NON-WOVEN U.V. STABILIZED MATERIAL. FABRIC TO BE FOLDED OVER TOP OF FENCE MIN. 300mm AND WIRE FASTENED.

Nottawasaga Valley Conservation Authority				APR'D:	DATE: 03.03.06
TYPICAL DETAIL OF SILT/SEDIMENT FENCE				DRAWN: A.S.C	SCALE: NTS
	NO.	REVISION	APR'D DATE	BSD-23 DRAFT	

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

SILTATION AND EROSION CONTROL DETAILS AND NOTES

TATHAM ENGINEERING

SC-3

AS SHOWN

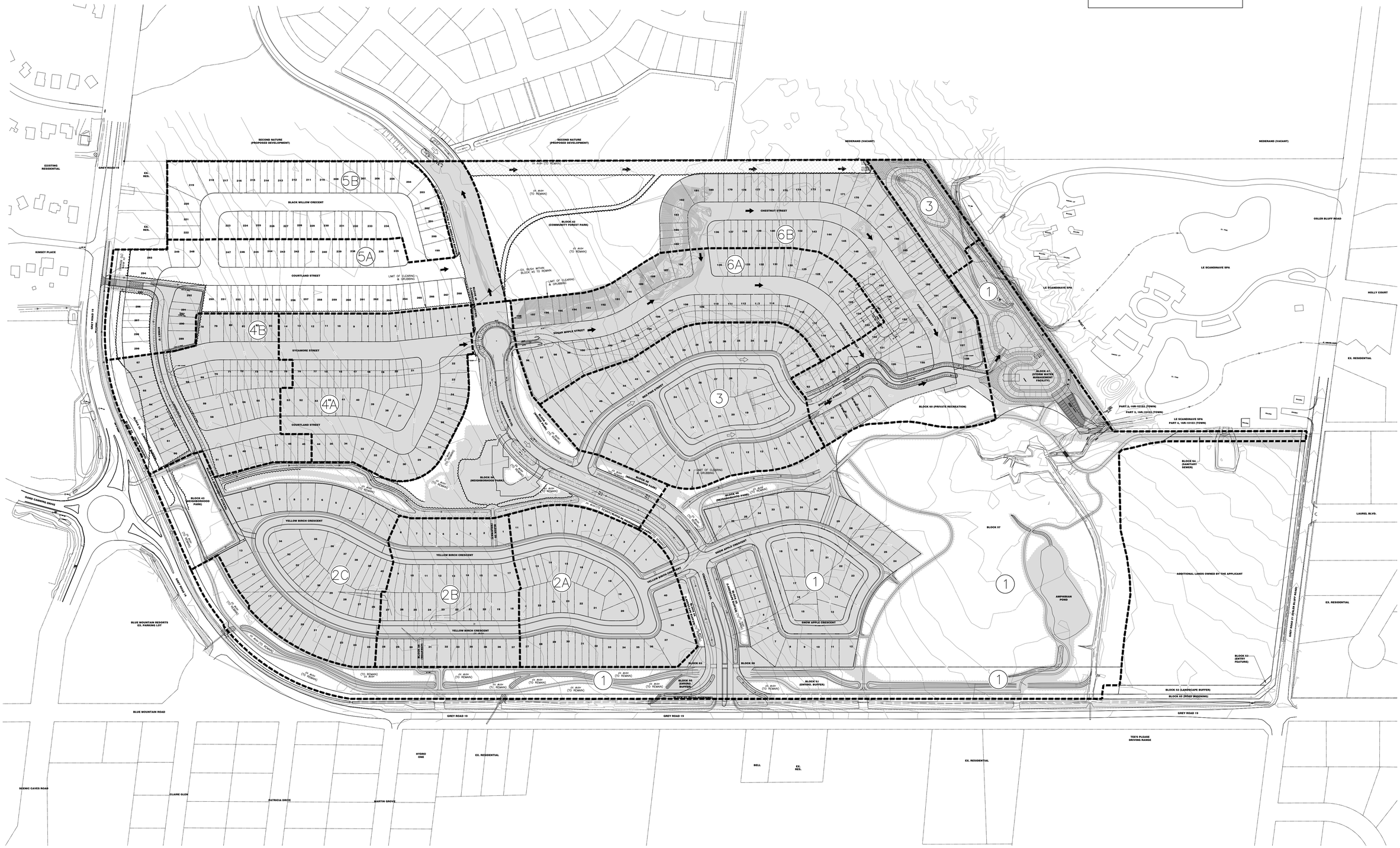
Drawing Name: 111179-4-SC03.dwg, Plotted: Oct 11, 2019

LEGEND

EXISTING AREA CLEARED AND GRUBBED

PROPOSED CLEARING AND GRUBBING

PHASE LIMIT


SECOND NATURE (PROPOSED DEVELOPMENT)
NEDERAND (VACANT)
EXISTING RESIDENTIAL
GREY ROAD 19
KINSEY PLACE
BLACK WILLOW CRESCENT
COURTLAND STREET
SYCAMORE STREET
SUGAR MAPLE STREET
CHESTNUT STREET
YELLOW BIRCH CRESCENT
SNOW APPLE CRESCENT
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 43 (NEIGHBOURHOOD PARK)
BLOCK 58 (NEIGHBOURHOOD PARK)
BLOCK 59 (NEIGHBOURHOOD PARK)
BLOCK 60 (PRIVATE RECREATION)
BLOCK 41 (STORM WATER MANAGEMENT FACILITY)
BLOCK 54 (SANITARY SEWER)
BLOCK 57
BLOCK 63
BLOCK 56 (ENVIRO. BUFFER)
BLOCK 53 (ENTRY FEATURE)
BLOCK 52 (LANDSCAPE BUFFER)
BLOCK 65 (ROAD WIDENING)
ADDITIONAL LANDS OWNED BY THE APPLICANT
AMPHIBIAN POND
LE SCANDINAVE SPA
LE SCANDINAVE SPA PART 4, 16R-10103 (TOWN)
PART 2, 16R-10103 (TOWN)
PART 3, 16R-10103 (TOWN)
OSLER BLUFF ROAD
HOLLY COURT
EX. RESIDENTIAL
LAUREL BLVD.
GREY ROAD 19 (OSLER BLUFF ROAD)
BLUE MOUNTAIN RESORTS EX. PARKING LOT
BLUE MOUNTAIN ROAD
SIDE ROAD 10
GOLD CANNON DRIVE
SCENIC CAVES ROAD
CLAIRE GLEN
PATRICIA DRIVE
MARTIN GROVE
HYDRO ONE
BELL
TEE'S PLEASE DRIVING RANGE
LIMIT OF CLEARING & GRUBBING
EX. BUSH (TO REMAIN)
EX. BUSH WITHIN BLOCK 43 TO REMAIN
EX. BUSH WITHIN BLOCK 42 TO REMAIN
EX. BUSH WITHIN BLOCK 58 TO REMAIN
EX. BUSH WITHIN BLOCK 59 TO REMAIN
EX. BUSH WITHIN BLOCK 63 TO REMAIN
EX. BUSH WITHIN BLOCK 56 TO REMAIN
EX. BUSH WITHIN BLOCK 57 TO REMAIN
EX. BUSH WITHIN BLOCK 53 TO REMAIN
EX. BUSH WITHIN BLOCK 52 TO REMAIN
EX. BUSH WITHIN BLOCK 65 TO REMAIN
EX. BUSH WITHIN BLOCK 54 TO REMAIN
EX. BUSH WITHIN BLOCK 41 TO REMAIN
EX. BUSH WITHIN BLOCK 60 TO REMAIN
EX. BUSH WITHIN BLOCK 61 TO REMAIN
EX. BUSH WITHIN BLOCK 62 TO REMAIN
EX. BUSH WITHIN BLOCK 64 TO REMAIN
EX. BUSH WITHIN BLOCK 66 TO REMAIN
EX. BUSH WITHIN BLOCK 67 TO REMAIN
EX. BUSH WITHIN BLOCK 68 TO REMAIN
EX. BUSH WITHIN BLOCK 69 TO REMAIN
EX. BUSH WITHIN BLOCK 70 TO REMAIN
EX. BUSH WITHIN BLOCK

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-47, DATED JANUARY 7, 2016 AND PLAN 16M-52, DATED MAY 11, 2017 AND PLAN 16M-57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-64, DATED JANUARY 22, 2019.

PHASE 4 LOT NUMBERS IN ACCORDANCE WITH DRAFT PLAN.

ALL OTHER LOT NUMBERS (PHASE 5 TO PHASE 6) IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED OCTOBER 30, 2018.

THE LINES SHOWN DIVIDING THE SEMI-DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

LEGEND

- SANITARY AREA BOUNDARY
- AREA IDENTIFICATION NUMBER
- AREA IN HECTARES
- POPULATION BASED ON 2.3 PERSONS PER UNIT
- SEMI-DETACHED LOT

NOTES

1. SEE MASTER SERVICING SANITARY DRAINAGE PLAN (111179-2, SHEET SAN-1) FOR ADDITIONAL INFORMATION.
2. SEE DRAWING DE-2 FOR SANITARY SEWER DESIGN SHEET.
3. PHASE 4 WORK TO INCLUDE EXTENSION OF SANITARY SEWER ON SUGAR MAPLE STREET FROM SAN MH 112 TO SAN MH 410. THE SERVICE CONNECTIONS INCLUDING TEES AT MAIN SHALL NOT BE CONSTRUCTED. A 1.0m LONG STUB AT THE NORTH INVERT OF SAN MH 405 SHALL BE PROVIDED FOR FUTURE EXTENSION OF MAIN TO CHESTNUT STREET.
4. PHASE 4 WORK TO INCLUDE EXTENSION OF SANITARY SEWER ON CROSSWINDS BOULEVARD FROM SAN MH 410 TO SAN MH 412 AND FROM SAN MH 412 TO 35m WEST OF COURTLAND STREET.

KEY PLAN

SECOND NATURE (PROPOSED DEVELOPMENT)

BLOCK 42 (COMMUNITY FOREST PARK)

BLOCK 41 (STORM WATER MANAGEMENT FACILITY

BLOCK 60 (PRIVATE RECRE

BLOCK 47 (NEIGHBOURHOOD PARK)

BLOCK 56 (NEIGHBOURHOOD PARK)

BLOCK 48 (NEIGHBOURHOOD PARK)

CHESTNUT STREET

SUGAR MAPLE STREET

WHITE OAK STREET

CROSSWINDS BLVD.

BLOCK 44 (LANDSCAPE BUFFER)

BLOCK 45 (LANDSCAPE BUFFER)

LIMIT OF PHASE 4 SANITARY SEWER

CONNECT TO EX. MAINTENANCE HOLE

3.0m WIDE MULTI-USE TRAIL

STAKE

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

SANITARY DRAINAGE PLAN

TATHAM ENGINEERING

SAN-1

1:1000

Drawing Name: 111179-4-SAN1.dwg, Plotted: Oct 11, 2019

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

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LEGEND

- SANITARY AREA BOUNDARY
- AREA IDENTIFICATION NUMBER → 112A
- AREA IN HECTARES → 13.36 | 57.5
- POPULATION BASED ON 2.3 PERSONS PER UNIT
- SEMI-DETACHED LOT

NOTES

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

SANITARY DRAINAGE PLAN

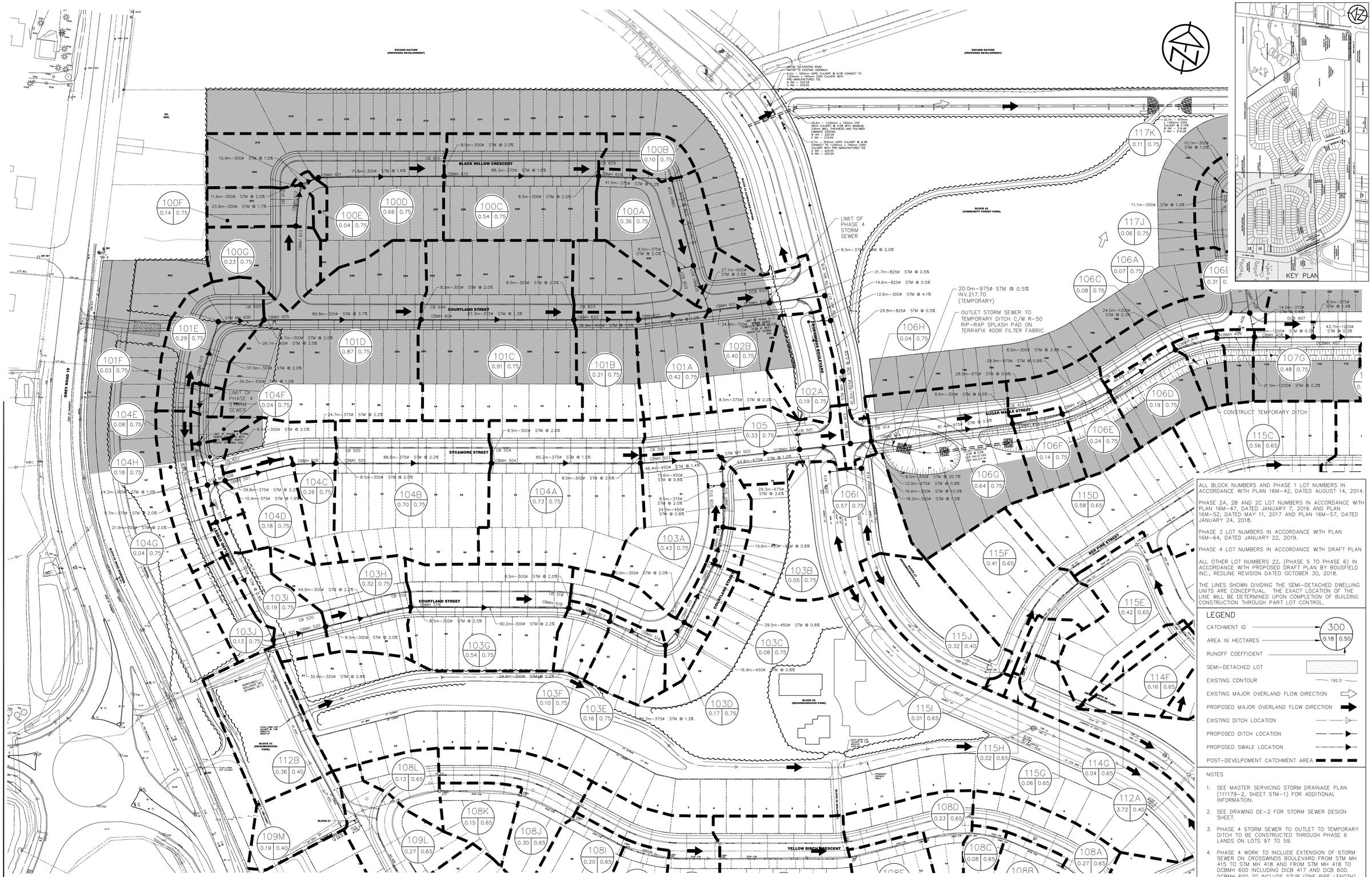
TATHAM ENGINEERING

SAN-2

1:1000

Drawing Name: 111179-4-SAN1.dwg, Plotted: Oct 11, 2019


SWITCH TO EXISTING ROAD
SWITCH TO EXISTING SIDEWALK
9.2m – 500mm HDPE CULVERT @ 8.2% CONNECT TO 1,030mm x 740mm CSPA CULVERT WITH PRE-MANUFACTURED TEE
S. INV – 220.05
N. INV – 220.05
SINGLE ARM SWING GATE (SEE DE-1)
29.3m – 1,030mm x 740mm CSP ARCH CULVERT @ 0.5% WITH MINIMUM 2.8mm WALL THICKNESS AND POLYMER LAMINATE COATING
W. INV – 220.09
E. INV – 220.09
6.7m – 500mm HDPE CULVERT @ 8.3% CONNECT TO 1,030mm x 740mm CSPA CULVERT WITH PRE-MANUFACTURED TEE
S. INV – 220.55
N. INV – 220.05
EX. FENCE TO BE REMOVED AND DISPOSED
14.2m – 970mm CSP ARCH CULVERT @ 0.40%
W. INV – 216.01
E. INV – 215.93
EX. FENCE TO BE REMOVED AND DISPOSED
22.7m – 970mm CSP ARCH CULVERT @ 0.70%
W. INV – 218.46
E. INV – 218.28
28.9m – 600# CSP CULVERT @ 3.48% W/ HW SPILL BERM
E. INV – 213.00
W. INV – 213.90
PROPERTY LINE
LIMIT OF PHASE 4 STORM SEWER
BLOCK 42 (COMMUNITY FOREST PARK)
BLOCK 43 (STORM WATER MANAGEMENT FACILITY)
BLOCK 44 (NEIGHBOURHOOD PARK)
BLOCK 45 (NEIGHBOURHOOD PARK)
BLOCK 46 (NEIGHBOURHOOD PARK)
BLOCK 47 (NEIGHBOURHOOD PARK)
BLOCK 48 (NEIGHBOURHOOD PARK)
BLOCK 49 (NEIGHBOURHOOD PARK)
BLOCK 50 (NEIGHBOURHOOD PARK)
BLOCK 51 (NEIGHBOURHOOD PARK)
BLOCK 52 (NEIGHBOURHOOD PARK)
BLOCK 53 (NEIGHBOURHOOD PARK)
BLOCK 54 (NEIGHBOURHOOD PARK)
BLOCK 55 (NEIGHBOURHOOD PARK)
BLOCK 56 (NEIGHBOURHOOD PARK)
BLOCK 57 (NEIGHBOURHOOD PARK)
BLOCK 58 (NEIGHBOURHOOD PARK)
BLOCK 59 (NEIGHBOURHOOD PARK)
BLOCK 60 (NEIGHBOURHOOD PARK)
BLOCK 61 (NEIGHBOURHOOD PARK)
BLOCK 62 (PRIVATE RECREATION)
BLOCK 63 (NEIGHBOURHOOD PARK)
BLOCK 64 (NEIGHBOURHOOD PARK)
BLOCK 65 (NEIGHBOURHOOD PARK)
BLOCK 66 (NEIGHBOURHOOD PARK)
BLOCK 67 (NEIGHBOURHOOD PARK)
BLOCK 68 (NEIGHBOURHOOD PARK)
BLOCK 69 (NEIGHBOURHOOD PARK)
BLOCK 70 (NEIGHBOURHOOD PARK)
BLOCK 71 (NEIGHBOURHOOD PARK)
BLOCK 72 (NEIGHBOURHOOD PARK)
BLOCK



ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–64, DATED JANUARY 22, 2019.

PHASE 4 LOT NUMBERS IN ACCORDANCE WITH DRAFT PLAN

ALL OTHER LOT NUMBERS 22, (PHASE 5 TO PHASE 6) IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED OCTOBER 30, 2018.

THE LINES SHOWN DIVIDING THE SEMI–DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

LEGEND

- CATCHMENT ID — 300
- AREA IN HECTARES — 0.18 | 0.50
- RUNOFF COEFFICIENT
- SEMI–DETACHED LOT
- EXISTING CONTOUR — 192.0
- EXISTING MAJOR OVERLAND FLOW DIRECTION
- PROPOSED MAJOR OVERLAND FLOW DIRECTION
- EXISTING DITCH LOCATION
- PROPOSED DITCH LOCATION
- PROPOSED SWALE LOCATION
- POST–DEVELPOMENT CATCHMENT AREA

NOTES

1. SEE MASTER SERVICING STORM DRAINAGE PLAN (111179–2, SHEET STM–1) FOR ADDITIONAL INFORMATION.
2. SEE DRAWING DE–2 FOR STORM SEWER DESIGN SHEET.
3. PHASE 4 STORM SEWER TO OUTLET TO TEMPORARY DITCH TO BE CONSTRUCTED THROUGH PHASE 6 LANDS ON LOTS 97 TO 59.
4. PHASE 4 WORK TO INCLUDE EXTENSION OF STORM SEWER ON CROSSWINDS BOULEVARD FROM STM MH 415 TO STM MH 418 AND FROM STM MH 418 TO DCBMH 600 INCLUDING DICB 417 AND DCB 600. DCBMH 600 TO INCLUDE STUB (ONE PIPE LENGTH) ON WEST INVERT.

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	
1.	
2.	
3.	
4.	

REVISION DESCRIPTION	DATE
1ST SUBMISSION	DEC 5/18
2ND SUBMISSION	JUNE 14/19
3RD SUBMISSION	JULY 30/19
4TH SUBMISSION	OCT 10/19

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

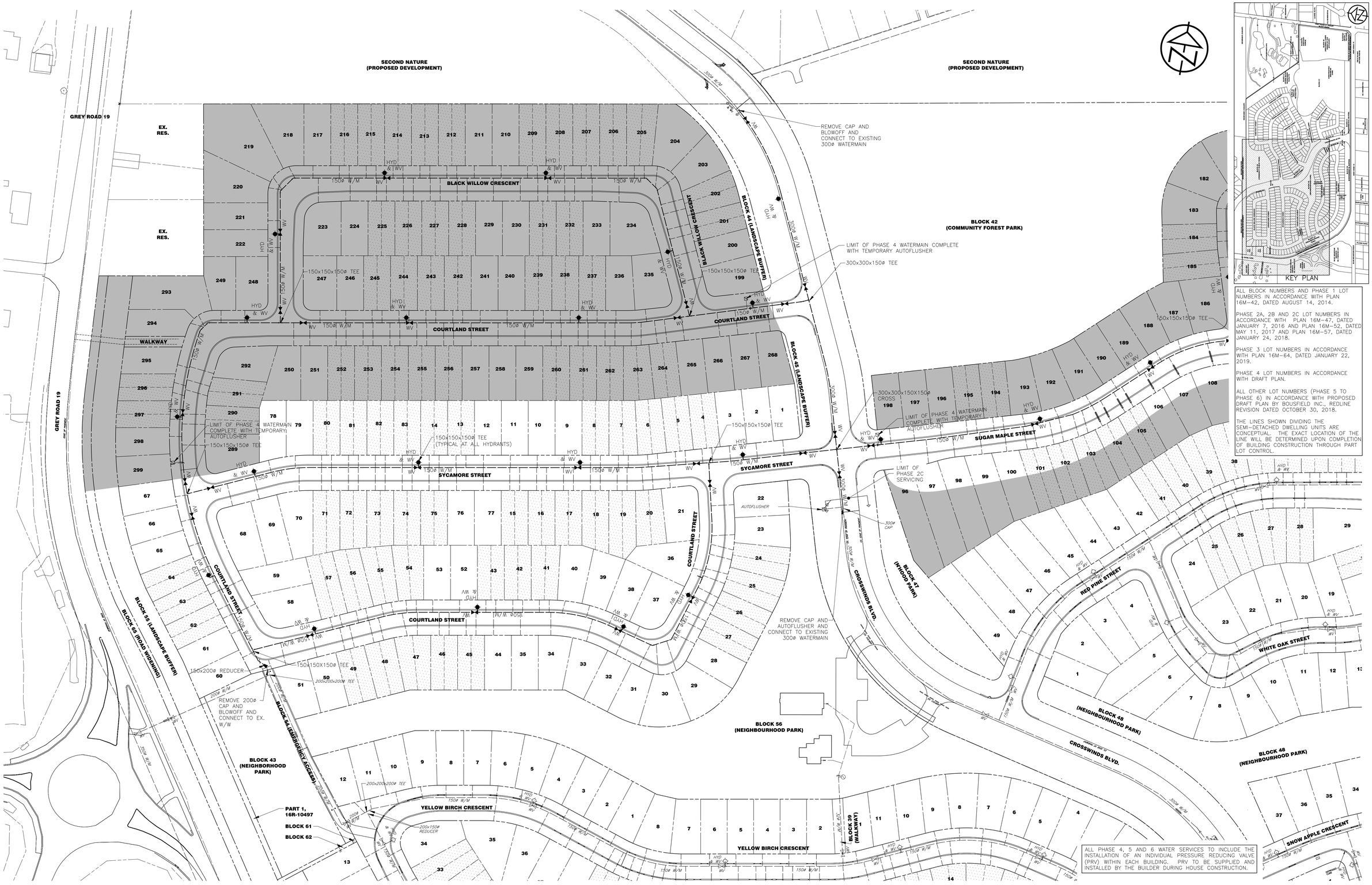
STORM DRAINAGE PLAN

TATHAM ENGINEERING

STM-2

1:1000

Drawing Name: 111179–4–STM1.dwg, Plotted: Oct 11, 2019



ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	
1.	
2.	
3.	
4.	

REVISION DESCRIPTION	DATE
1ST SUBMISSION	DEC 5/18
2ND SUBMISSION	JUNE 14/19
3RD SUBMISSION	JULY 30/19
4TH SUBMISSION	OCT 10/19

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

WATER DISTRIBUTION PLAN

TATHAM ENGINEERING

WAT-2

1:1000

Drawing Name: 111179-4-WAT1.dwg, Plotted: Oct 11, 2019

[redacted] 10/30/2019

REFER TO DRAWING PH-1 FOR PHASING LIMITS

REFER TO DRAWING OR-1 FOR SHEET ORIENTATION

KEY PLAN

SANITARY SEWER (EXCLUDING SERVICE LATERALS) AND TEMPORARY DITCH ARE ONLY SERVICING WORKS TO BE CONSTRUCTED ALONG SUGAR MAPLE STREET AS PART OF PHASE 4

ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

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PHASE 3 LOT NUMBERS IN ACCORDANCE PLAN 16M-64, DATED JANUARY 22, 2019.

PHASE 4 LOT NUMBERS IN ACCORDANCE DRAFT PLAN.

ALL OTHER LOT NUMBERS (PHASE 5 TO PHASE 6) IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED OCTOBER 30, 2018.

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

LEGEND

PROPOSED WATER SERVICE ———————

PROPOSED SANITARY SERVICE ———————

PROPOSED STORM SERVICE ———————

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
2.	2ND SUBMISSION	JUNE 14/19
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4.	4TH SUBMISSION	OCT 10/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

GENERAL SERVICING PLAN

TATHAM ENGINEERING

GS-1

1:1000

[redacted] 10/30/2019

REFER TO DRAWING PH-1 FOR PHASING LIMITS

REFER TO DRAWING OR-1 FOR SHEET ORIENTATION

KEY PLAN

SANITARY SEWER (EXCLUDING SERVICE LATERALS) AND TEMPORARY DITCH ARE ONLY SERVICING WORKS TO BE CONSTRUCTED ON SUGAR MAPLE STREET AS PART OF PHASE 4

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PHASE 4 LOT NUMBERS IN ACCORDANCE DRAFT PLAN.

ALL OTHER LOT NUMBERS (PHASE 5 TO PHASE 6) IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED OCTOBER 30, 2018.

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

LEGEND

PROPOSED WATER SERVICE

PROPOSED SANITARY SERVICE

PROPOSED STORM SERVICE

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

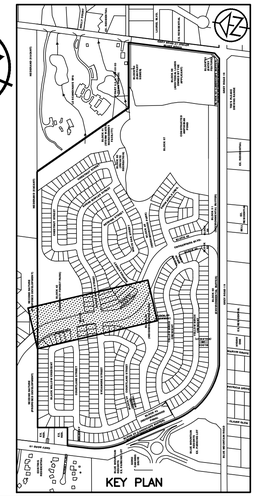
GENERAL SERVICING PLAN

TATHAM ENGINEERING

GS-2

1:1000





ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-47, DATED JANUARY 7, 2016 AND PLAN 16M-52, DATED MAY 11, 2017 AND PLAN 16M-57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-64, BY PATTEN & THOMSEN, DATED JANUARY 22 2019.

PHASE 4 LOT NUMBERS IN ACCORDANCE WITH DRAFT PLAN.

ALL OTHER LOT NUMBERS (PHASE 5 TO PHASE 6) IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED OCTOBER 30, 2018.

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LEGEND

LOT No.	68
LOT GRADING TYPE (SEE LG-4)	Ⓐ
FIRE SEPARATION LOT	Ⓕ
MINIMUM APRON GRADE (ONE LOCATION)	APR=200.22
MINIMUM BASEMENT FLOOR ELEVATION	BFL=220.22
INDIVIDUAL PRESSURE REDUCING VALVE	PRV
EXISTING SPOT ELEVATION	× 219.50
PROPOSED SPOT ELEVATION	× 219.60
EXISTING BOREHOLE	BH 1
EXISTING TEST PIT	TP 1
EXISTING GRADING DIRECTION	
PROPOSED GRADING DIRECTION/SLOPE	2.0%
EXISTING OVERLAND FLOW DIRECTION	
PROPOSED OVERLAND FLOW DIRECTION	

NOTES

1. THE MINIMUM APRON GRADES SHOWN ON THE LOT GRADING PLANS ARE 0.2m TO 0.4m ABOVE THE HIGHEST SIDEYARD SWALE ELEVATION ADJACENT TO THE HOUSE. APRON GRADES ARE BASED ON A TYPICAL 14.0m LONG HOUSE AT A 6.0m FRONT YARD SETBACK. APRON GRADES ARE SUBJECT TO CHANGE BASED ON HOUSE TYPE, HOUSE DIMENSIONS AND FRONT YARD SETBACK, AS SHOWN ON THE INDIVIDUAL LOT GRADING PLANS PREPARED FOR EACH LOT.
2. REFER TO SHEET LG-6 FOR BOREHOLE DATA.
3. ENGINEERED FILL WILL BE PROVIDED ON INDIVIDUAL LOTS IN SOME AREAS. LIMITS OF ENGINEERED FILL TO BE RESOLVED WITH HOUSE BUILDER PRIOR TO SITE SERVICING. IN OTHER AREAS THE HOUSE BUILDER WILL BE REQUIRED TO EXTEND FOOTINGS TO SUITABLE NATIVE MATERIAL AS REQUIRED.
4. PLACEMENT OF ENGINEERED FILLL TO BE CARRIED OUT UNDER THE SUPERVISION OF A QUALIFIED GEOTECHNICAL ENGINEER. ENGINEERED FILL TO BE COMPACTED TO A MINIMUM 98% OF THE MATERIAL'S SPMDD.
5. ALL PHASE 4, 5 AND 6 WATER SERVICES TO INCLUDE THE INSTALLATION OF AN INDIVIDUAL PRESSURE REDUCING VALVE (PRV) WITHIN EACH BUILDING. PRV TO BE SUPPLIED AND INSTALLED BY THE BUILDER DURING HOUSE CONSTRUCTION.
6. PORTIONS OF PHASE 4, 5 AND 6 LANDS CONTAIN EXISTING CONSTRUCTION ACCESS ROADS AND STOCKPILE AREAS NOT SHOWN. THE EXISTING TOPOGRAPHIC INFORMATION DOES NOT NECESSARILY REPRESENT EXISTING CONDITIONS WHERE THESE FEATURES HAVE BEEN CONSTRUCTED.

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
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3.	3RD SUBMISSION	JULY 30/19
4.	4TH SUBMISSION	OCT 10/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

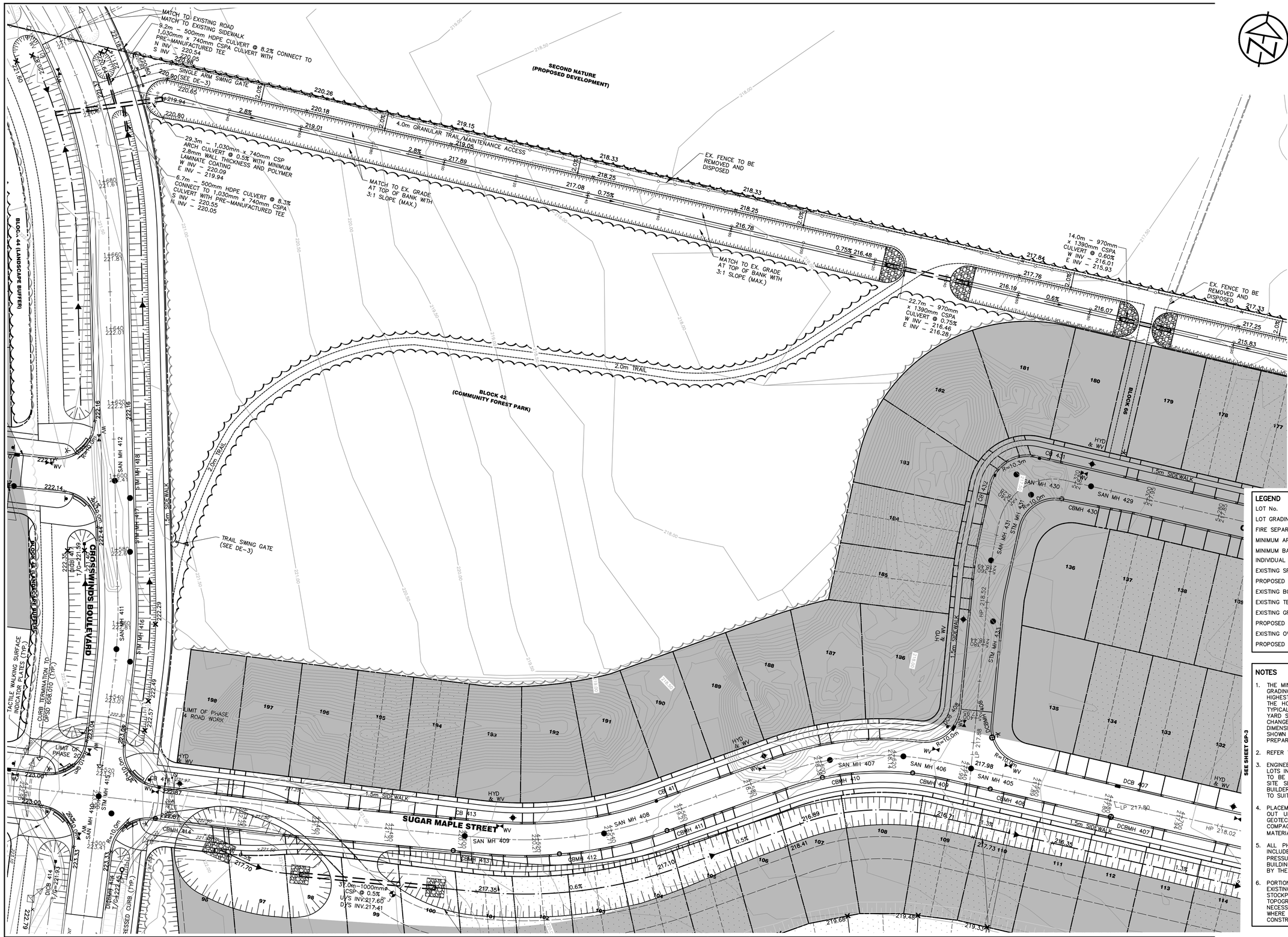
GRADING PLAN

TATHAM ENGINEERING

GP-1

1:500

Drawing Name: 111179-4-GP01.dwg, Plotted: Oct 11, 2019



ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

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LEGEND

LOT No.	68
LOT GRADING TYPE (SEE LG–4)	(A)
FIRE SEPARATION LOT	(F)
MINIMUM APRON GRADE (ONE LOCATION)	APR=200.22
MINIMUM BASEMENT FLOOR ELEVATION	BFL=220.22
INDIVIDUAL PRESSURE REDUCING VALVE	PRV
EXISTING SPOT ELEVATION	× 219.50
PROPOSED SPOT ELEVATION	× 219.60
EXISTING BOREHOLE	BH 1
EXISTING TEST PIT	TP 1
EXISTING GRADING DIRECTION	
PROPOSED GRADING DIRECTION/SLOPE	2.0%
EXISTING OVERLAND FLOW DIRECTION	
PROPOSED OVERLAND FLOW DIRECTION	

NOTES

1. THE MINIMUM APRON GRADES SHOWN ON THE LOT GRADING PLANS ARE 0.2m TO 0.4m ABOVE THE HIGHEST SIDEYARD SWALE ELEVATION ADJACENT TO THE HOUSE. APRON GRADES ARE BASED ON A TYPICAL 14.0m LONG HOUSE AT A 6.0m FRONT YARD SETBACK. APRON GRADES ARE SUBJECT TO CHANGE BASED ON HOUSE TYPE, HOUSE DIMENSIONS AND FRONT YARD SETBACK, AS SHOWN ON THE INDIVIDUAL LOT GRADING PLANS PREPARED FOR EACH LOT.
2. REFER TO SHEET LG–6 FOR BOREHOLE DATA.
3. ENGINEERED FILL WILL BE PROVIDED ON INDIVIDUAL LOTS IN SOME AREAS. LIMITS OF ENGINEERED FILL TO BE RESOLVED WITH HOUSE BUILDER PRIOR TO SITE SERVICING. IN OTHER AREAS THE HOUSE BUILDER WILL BE REQUIRED TO EXTEND FOOTINGS TO SUITABLE NATIVE MATERIAL AS REQUIRED.
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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

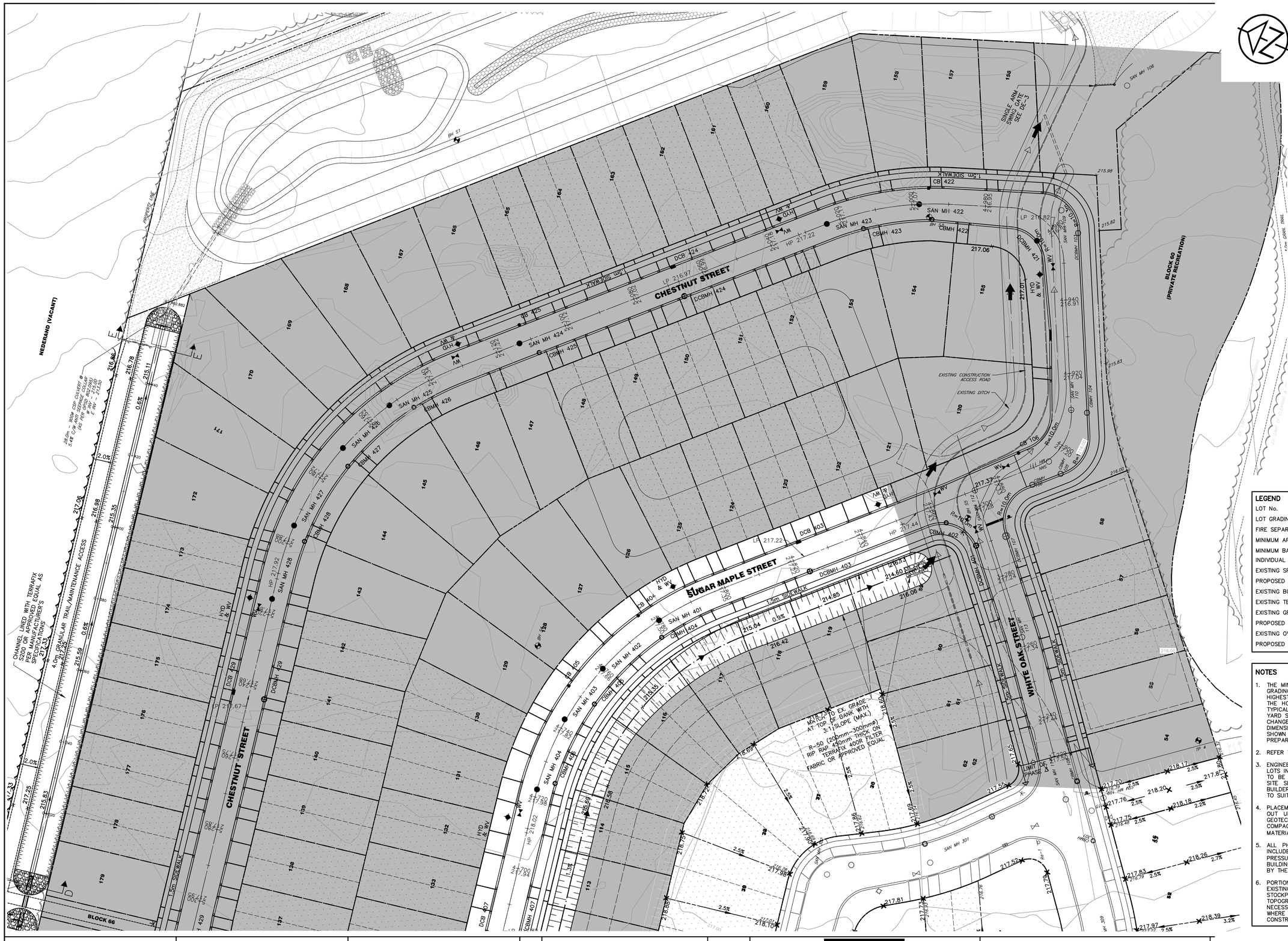
GRADING PLAN

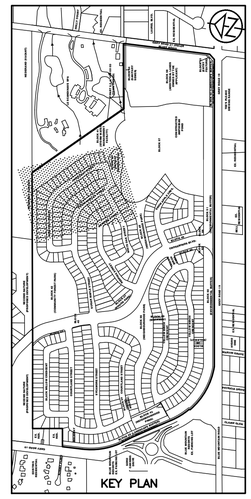
TATHAM ENGINEERING

GP-2

1 : 500

Drawing Name: 111179–4–GP02_3.dwg, Plotted: Oct 11, 2019





ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M-42, DATED AUGUST 14, 2014.

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PROPOSED OVERLAND FLOW DIRECTION	

NOTES

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BENCHMARKS

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

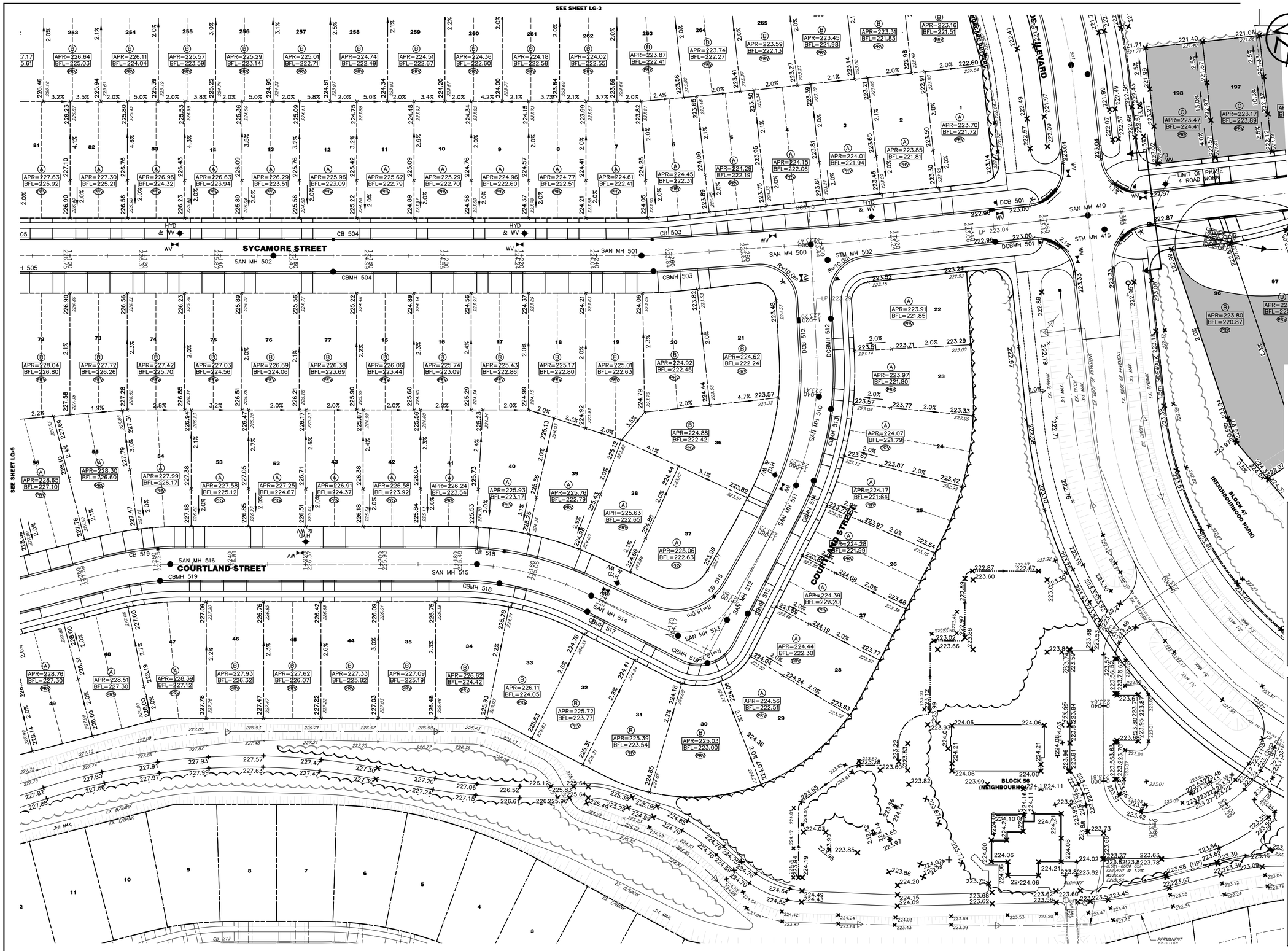
GRADING PLAN

TATHAM ENGINEERING

GP-3

1 : 500

Drawing Name: 111179-4-GP02_3.dwg, Plotted: Oct 11, 2019



ALL BLOCK NUMBERS AND PHASE 1 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–42, DATED AUGUST 14, 2014.

PHASE 2A, 2B AND 2C LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–47, DATED JANUARY 7, 2016 AND PLAN 16M–52, DATED MAY 11, 2017 AND PLAN 16M–57, DATED JANUARY 24, 2018.

PHASE 3 LOT NUMBERS IN ACCORDANCE WITH PLAN 16M–64, BY PATTEN & THOMSEN, DATED JANUARY 22, 2019.

PHASE 4 LOT NUMBERS IN ACCORDANCE WITH DRAFT PLAN

ALL OTHER LOT NUMBERS (PHASE 5 TO PHASE 6) IN ACCORDANCE WITH PROPOSED DRAFT PLAN BY BOUSFIELD INC., REDLINE REVISION DATED OCTOBER 30, 2018.

THE LINES SHOWN DIVIDING THE SEMI–DETACHED DWELLING UNITS ARE CONCEPTUAL. THE EXACT LOCATION OF THE LINE WILL BE DETERMINED UPON COMPLETION OF BUILDING CONSTRUCTION THROUGH PART LOT CONTROL.

LEGEND

LOT No.	68
LOT GRADING TYPE (SEE LG–4)	(A)
FIRE SEPARATION LOT	(F)
MINIMUM APRON GRADE (ONE LOCATION)	APR=200.22
MINIMUM BASEMENT FLOOR ELEVATION	BFL=220.22
INDIVIDUAL PRESSURE REDUCING VALVE	(PRV)
EXISTING SPOT ELEVATION	× 219.50
PROPOSED SPOT ELEVATION	× 219.60
EXISTING BOREHOLE	BH 1
EXISTING TEST PIT	TP 1
EXISTING GRADING DIRECTION	
PROPOSED GRADING DIRECTION/SLOPE	2.0%
EXISTING OVERLAND FLOW DIRECTION	
PROPOSED OVERLAND FLOW DIRECTION	

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WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

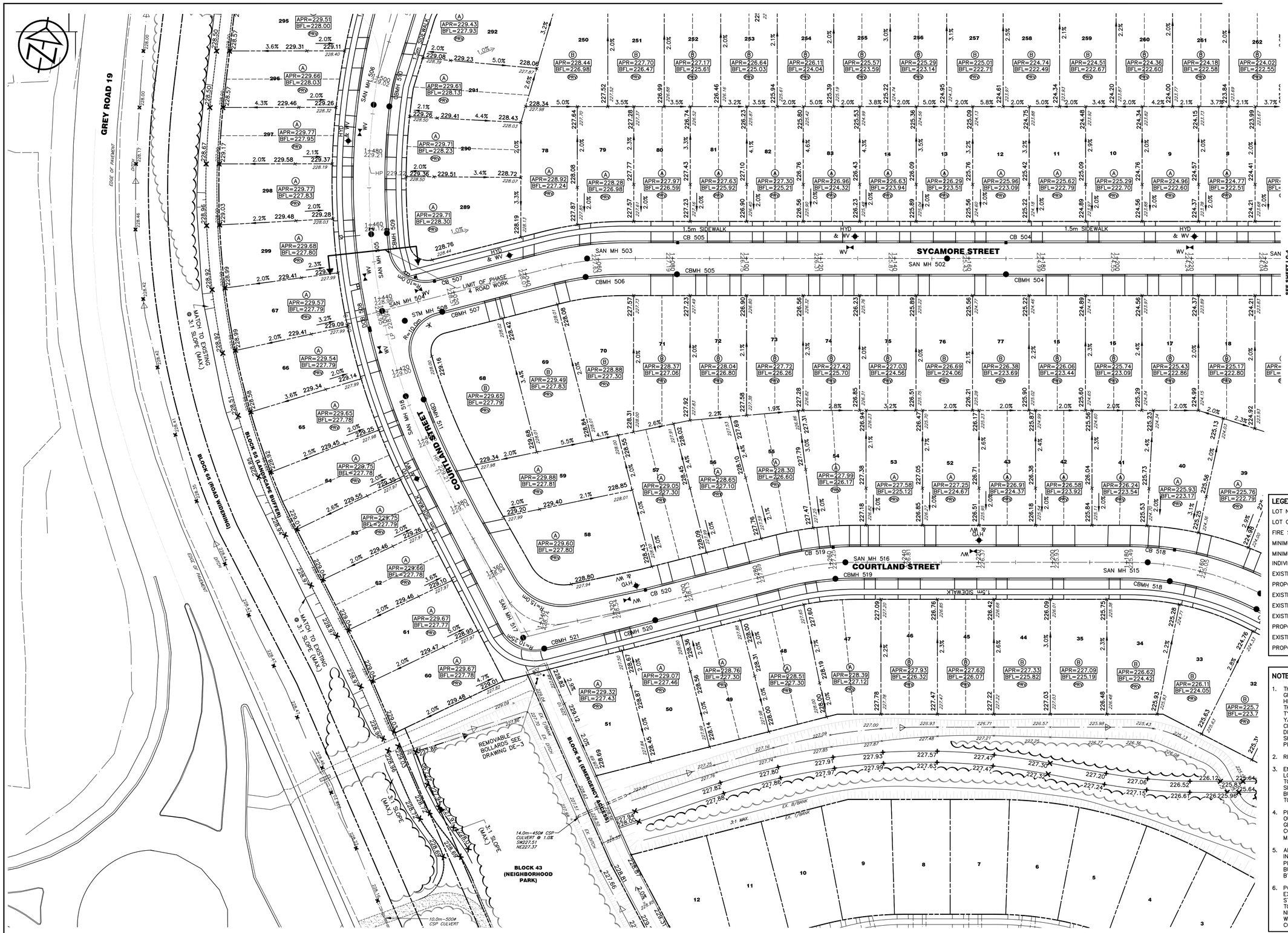
LOT GRADING PLAN

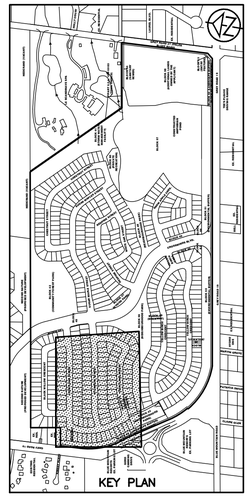
TATHAM ENGINEERING

LG–4

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Drawing Name: 111179–5–LG04.dwg, Plotted: Oct 11, 2019





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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

LOT GRADING PLAN

TATHAM ENGINEERING

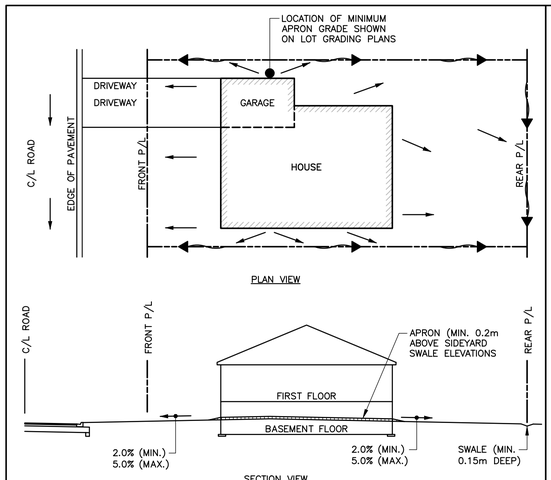
LG-5

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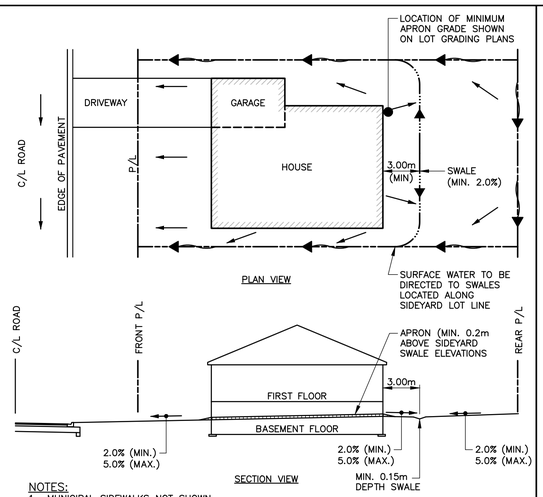
REFERENCE NUMBER	EX. GROUND SURFACE ELEV. (m)	SUGGESTED DEEPEST LOWER FLOOR LEVEL	
		DEPTH	ELEVATION
BH1	216.8	1.0	215.8
BH2	223.0	1.5	221.5
BH3	223.3	1.5	221.8
BH4	222.1	1.5	220.6
BH5	223.2	1.5	221.7
BH6	227.2	0.5	226.7
BH7	228.0	0.5	227.5
BH8	227.9	0.5	227.4
BH9	225.6	1.5	224.1
BHS1	215.9	1.5	214.4
BHS2	215.3	0.5	214.8
BHS3	216.0	0.5	215.5
BHS4	216.5	1.5	215.0
BHS5	216.1	0.0	216.1
BH101	226.5	1.5	225.0
BH102	223.4	1.5	221.9
BH103	223.1	1.5	221.6
BH104	219.6	1.5	218.1
BH105	218.0	1.0	217.0
BH106	213.4	1.0	212.4
TP1	223.2	1.5	221.7
TP2	225.6	1.5	224.1
TP3	221.2	1.5	219.7
TP4	216.2	0.5	215.7
TP5	222.5	1.5	221.0
TP6	227.0	1.0	226.0
TP7	222.2	1.5	220.7
TP8	212.5	1.0	211.5

DATA TAKEN FROM PAGE 9 OF SUPPLEMENTARY GEOTECHNICAL INVESTIGATION – PROPOSED WINDFALL DEVELOPMENT, PREPARED BY TERRAPROBE INC., DATED NOVEMBER 14, 2011, FILE No. 31-11-7117(A)



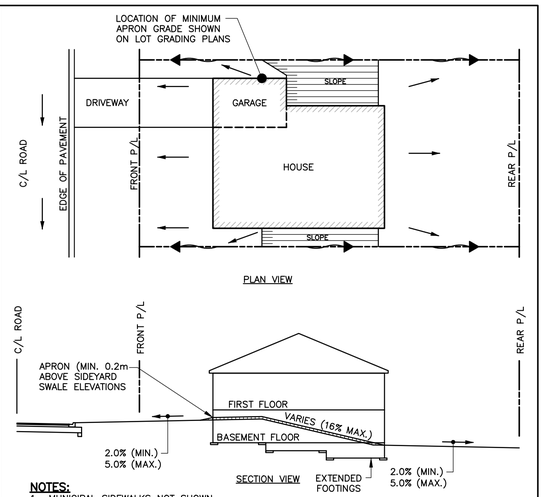
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TYPICAL SPLIT LOT DRAINAGE WITH ATTACHED GARAGE
TYPE – A
NTS



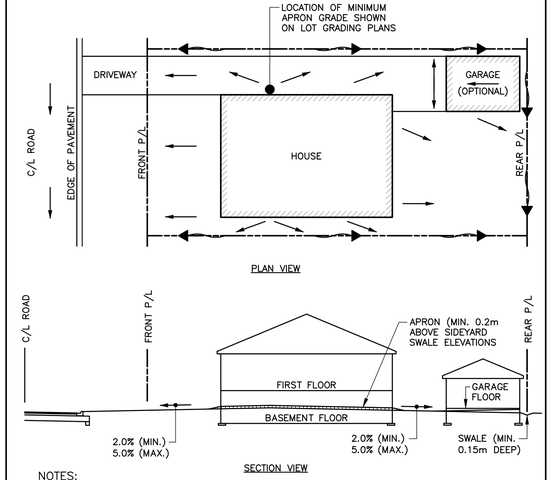
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TYPICAL REAR TO FRONT LOT DRAINAGE WITH ATTACHED GARAGE
TYPE – B
NTS



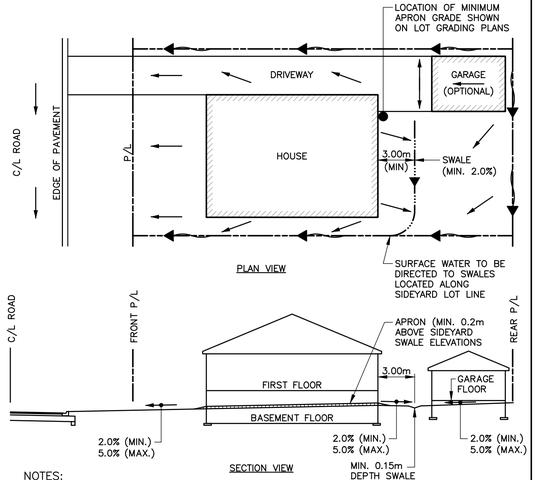
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TYPICAL SPLIT LOT DRAINAGE
WALKOUT/LOOKOUT HOUSE TYPE
TYPE – C
NTS



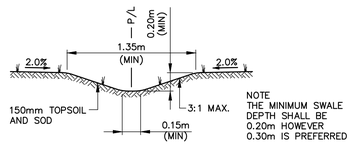
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TYPICAL SPLIT LOT DRAINAGE WITH REAR GARAGE
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NTS

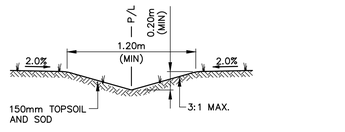


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TYPICAL REAR TO FRONT LOT DRAINAGE WITH REAR GARAGE
TYPE – B
NTS



TYPICAL SIDE AND REAR YARD SWALE DETAIL
NTS



TYPICAL SIDE AND REAR YARD SWALE DETAIL ADJACENT TO GARAGE AND DRIVEWAY
NTS

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WINDFALL PHASE 4
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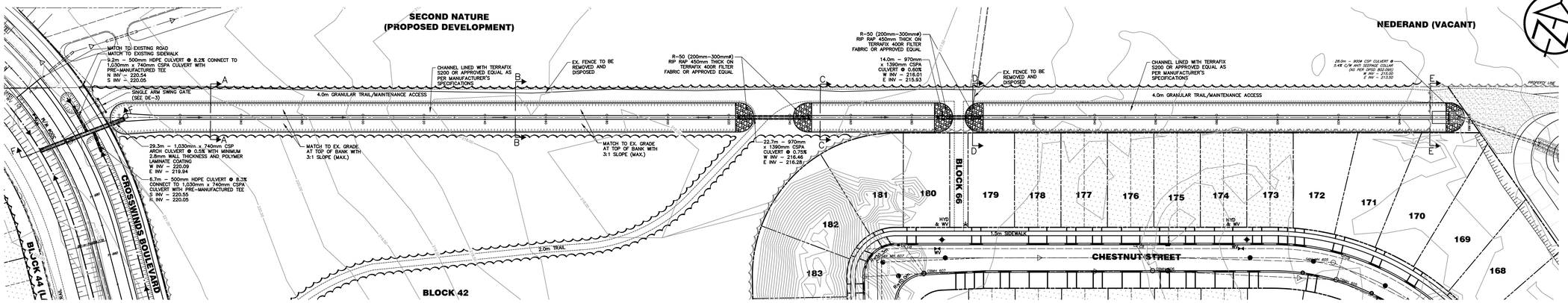
LOT GRADING DETAILS

TATHAM ENGINEERING

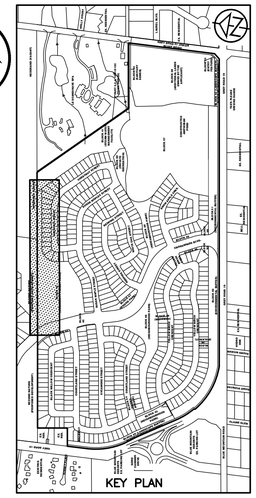
LG-6

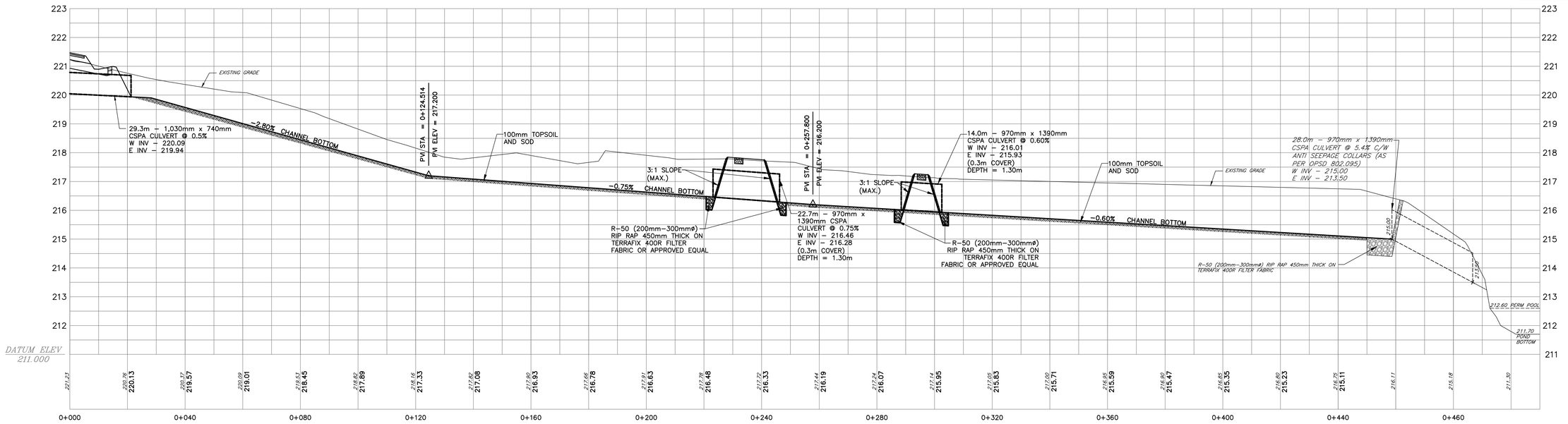
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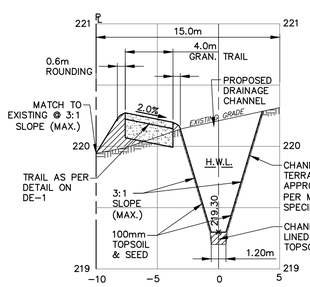


PLAN
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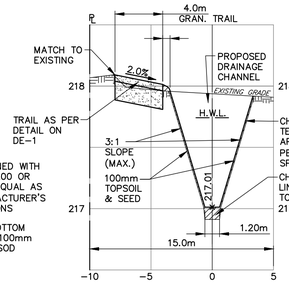




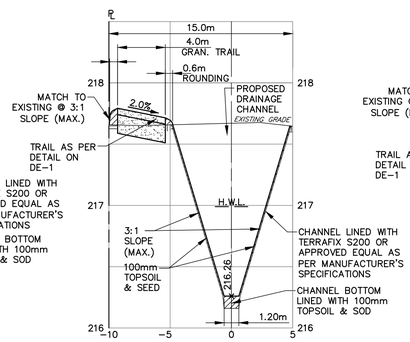
PROFILE
SCALE=1:750 VERT.=1:75



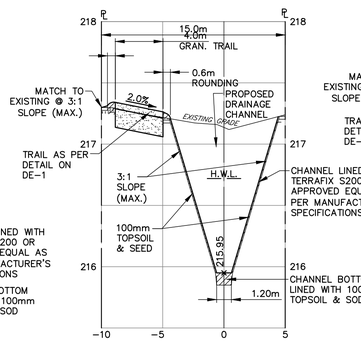
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CROSS SECTION A
SCALE: HOR-1:250 VERT-1:25



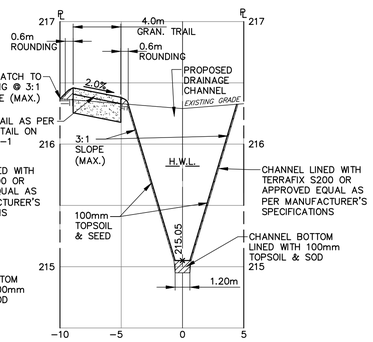
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CROSS SECTION B
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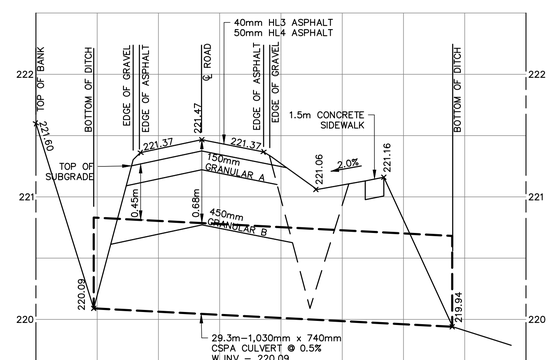
0+250
CROSS SECTION C
SCALE: HOR-1:250 VERT-1:25



0+300
CROSS SECTION D
SCALE: HOR-1:250 VERT-1:25



0+450
CROSS SECTION E
SCALE: HOR-1:250 VERT-1:25



CROSS SECTION F
SCALE: HOR-1:250 VERT-1:25

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
2.	2ND SUBMISSION	JUNE 14/19
3.	3RD SUBMISSION	JULY 30/19
4.	4TH SUBMISSION	OCT 10/19

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

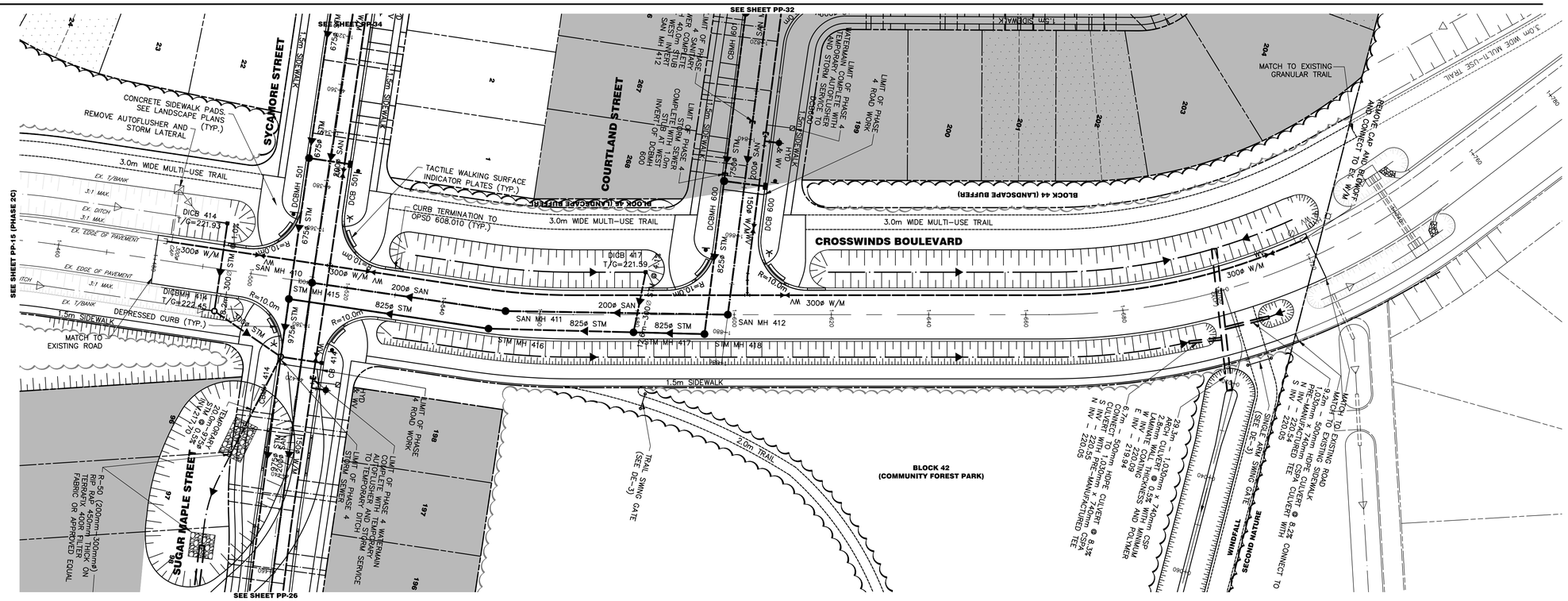
DRAINAGE CHANNEL
CROSSWINDS BLVD. TO SWMF

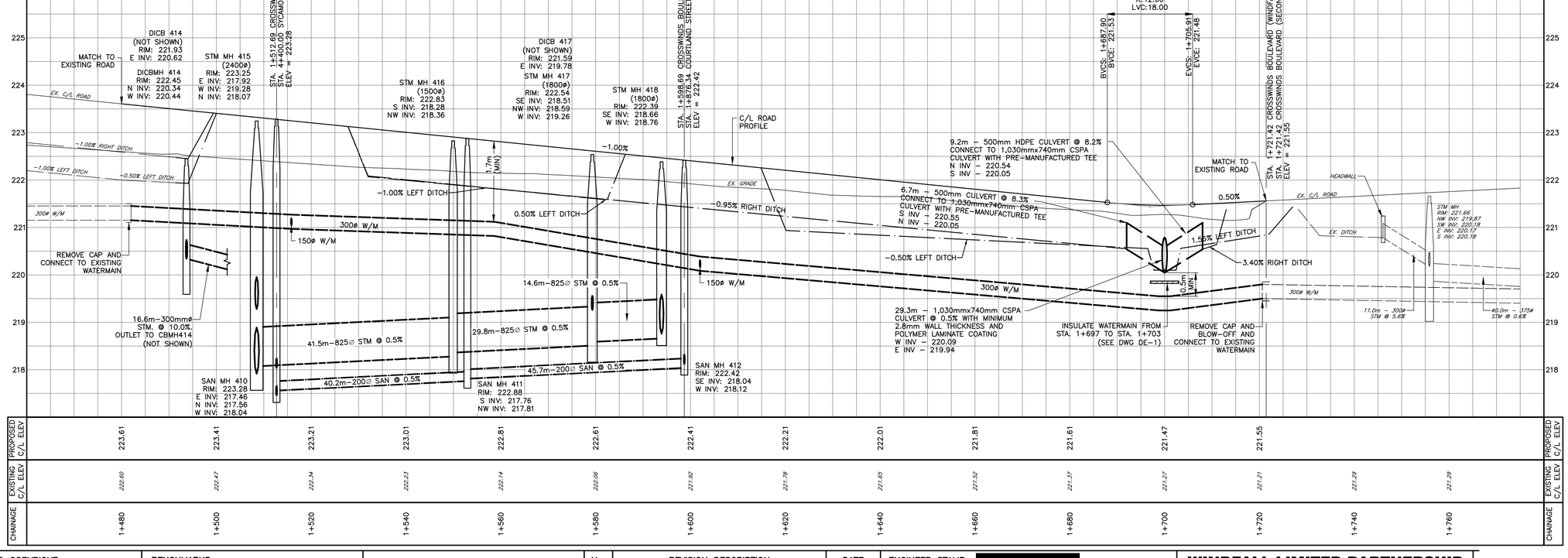
TATHAM ENGINEERING

DC-1

AS SHOWN

Drawing Name: 111179-4-DC01.dwg, Plotted: Oct 11, 2019





CHAINAGE	1+480	1+500	1+520	1+540	1+560	1+580	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760
EXISTING C/L ELEV	222.60	222.47	222.34	222.21	222.14	222.06	221.92	221.78	221.65	221.52	221.37	221.27	221.21	221.29	221.39
PROPOSED C/L ELEV	223.61	223.41	223.21	223.01	222.81	222.61	222.41	222.21	222.01	221.81	221.61	221.47	221.55		

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

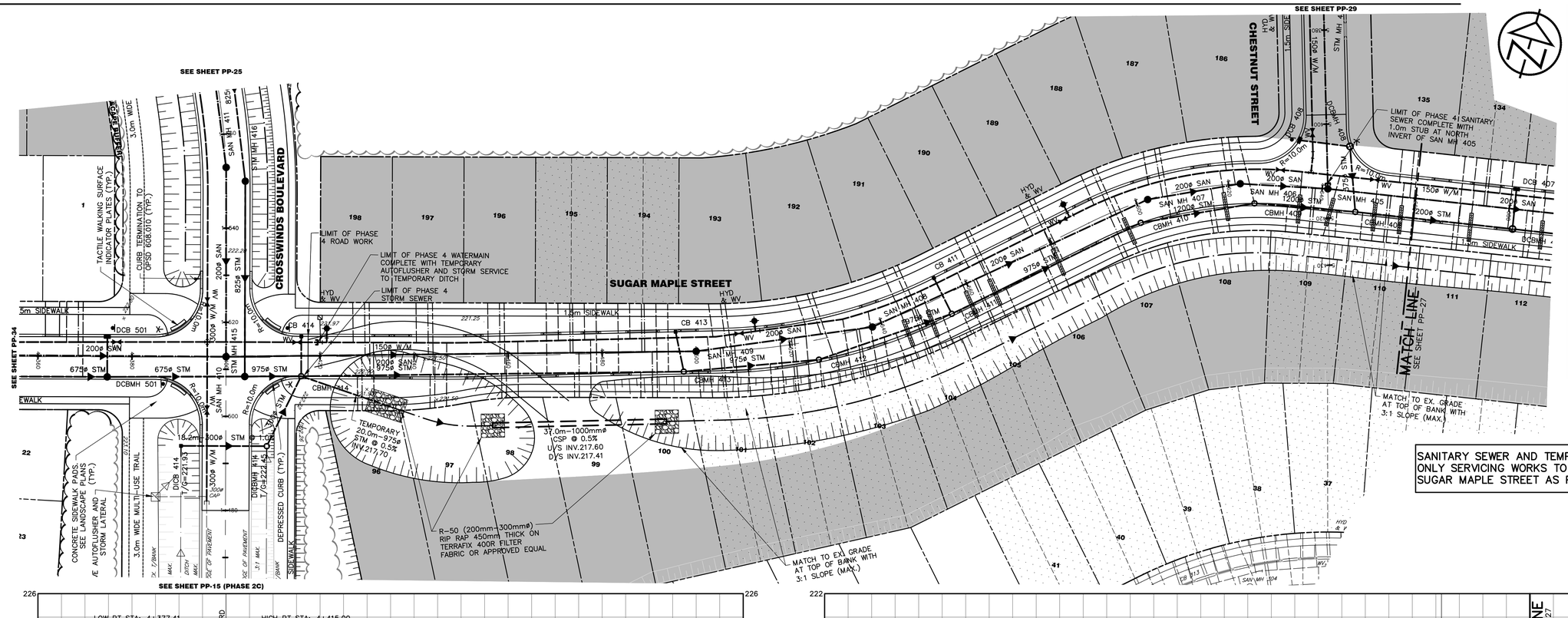
PLAN AND PROFILE CROSSWINDS BOULEVARD STA 1+460 TO 1+780

TATHAM ENGINEERING

PP-25

1 : 500 HORIZ.
1 : 50 VERT.

Drawing Name: 111179-4-PP1.dwg, Plotted: Oct 11, 2019



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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

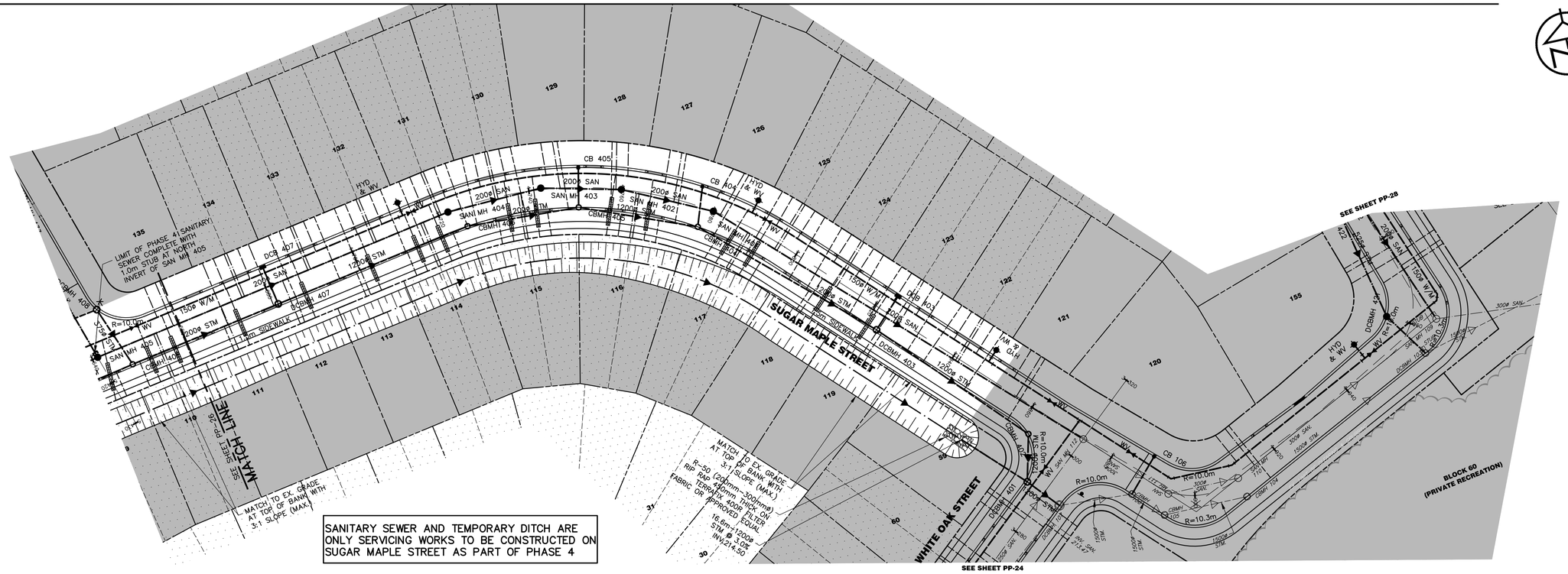
PLAN AND PROFILE
SUGAR MAPLE STREET
STA 4+380 TO 4+660

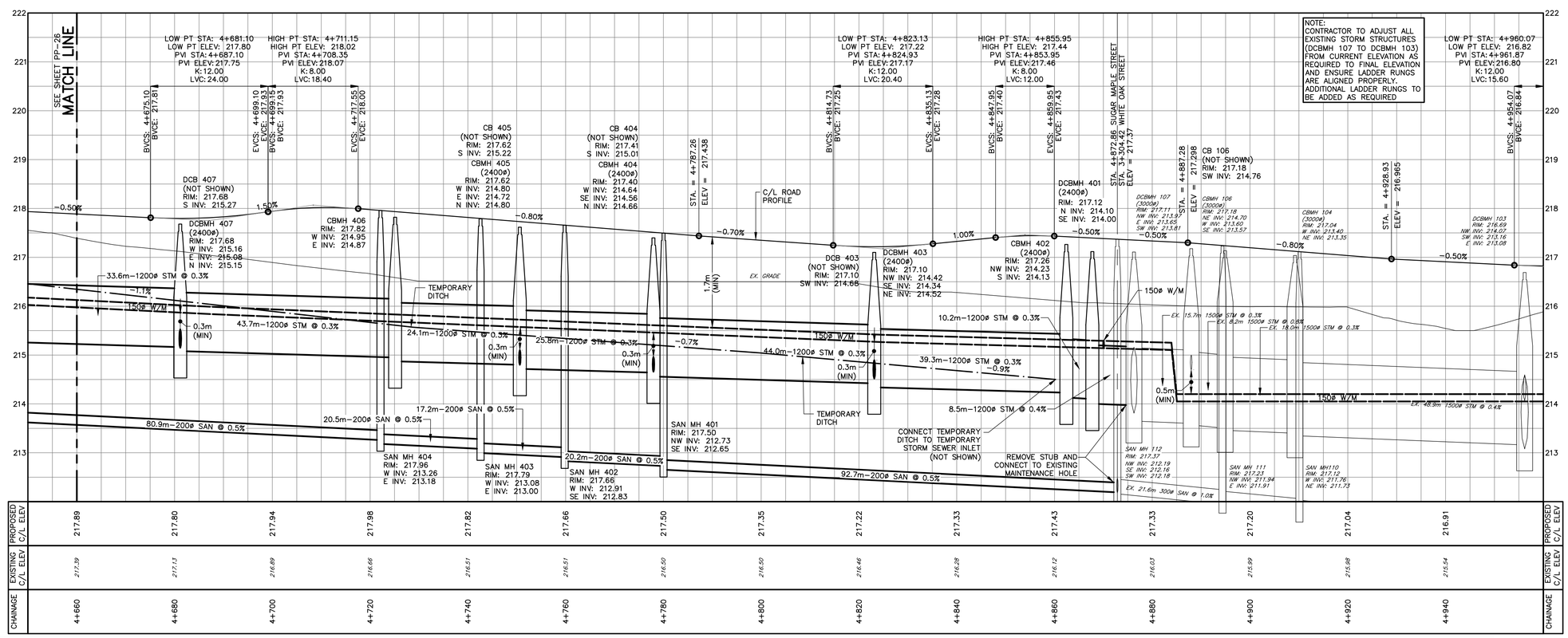
TATHAM ENGINEERING

PP-26

1 : 500 HORIZ.
1 : 50 VERT.

Drawing Name: 111179-4-PP1.dwg, Plotted: Oct 11, 2019





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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

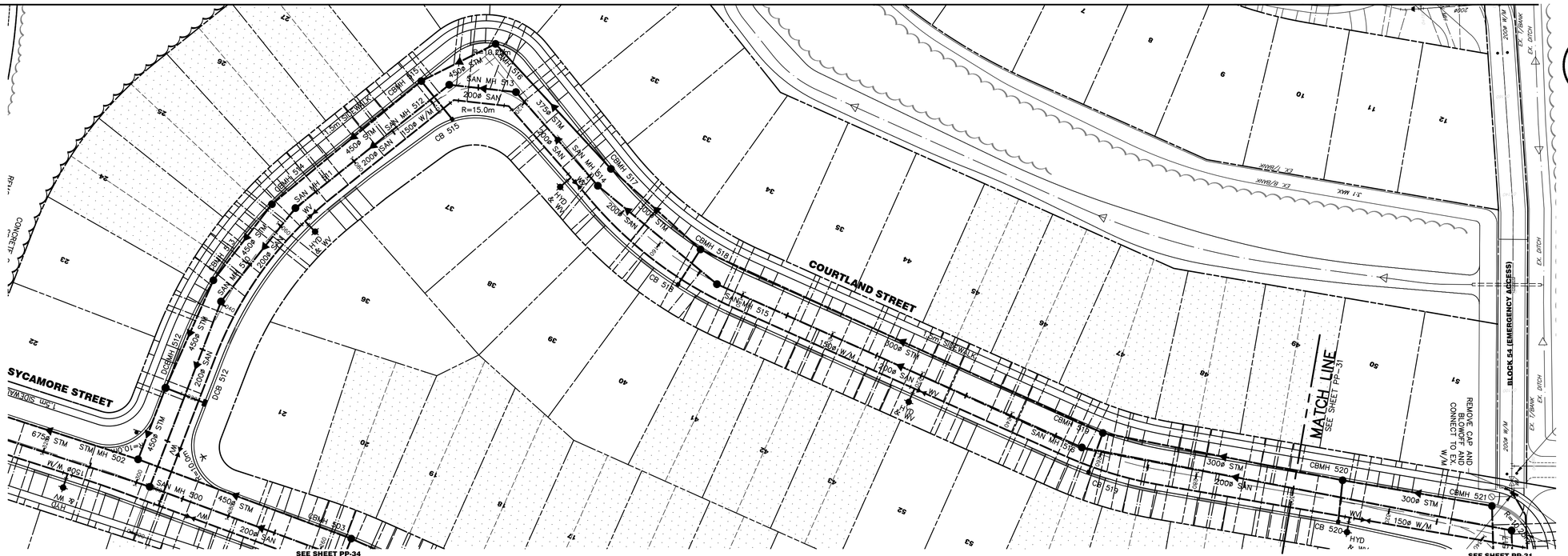
PLAN AND PROFILE
SUGAR MAPLE STREET
STA 4+660 TO 4+960

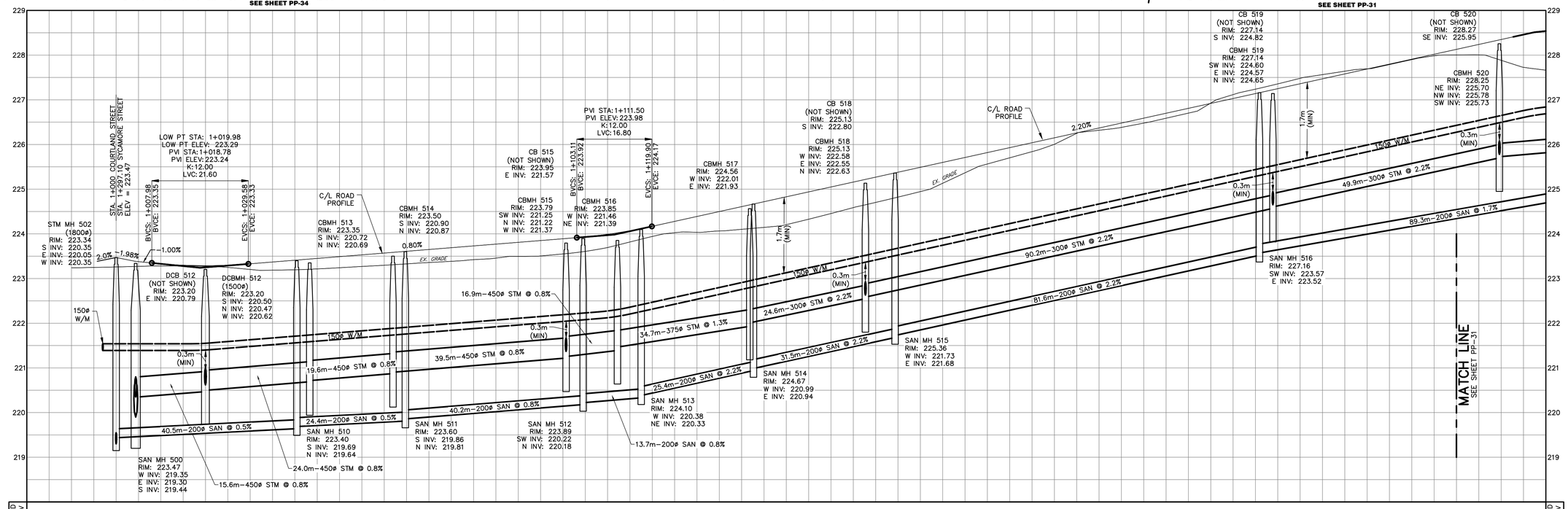
TATHAM ENGINEERING

PP-27

1 : 500 HORIZ.
1 : 50 VERT.

Drawing Name: 111179-4-PP1.dwg, Plotted: Oct 11, 2019





PROPOSED C/L ELEV	223.47	223.29	223.41	223.57	223.73	223.89	224.17	224.61	225.05	225.49	225.93	226.37	226.81	227.25	227.69	228.13	PROPOSED C/L ELEV
EXISTING C/L ELEV	223.26	223.27	223.20	223.30	223.42	223.55	223.94	224.10	224.46	224.85	225.70	226.32	226.70	227.36	227.69	228.00	EXISTING C/L ELEV
CHAINAGE	1+000	1+020	1+040	1+060	1+080	1+100	1+120	1+140	1+160	1+180	1+200	1+220	1+240	1+260	1+280	1+300	CHAINAGE

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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

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4.	4TH SUBMISSION	OCT 10/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

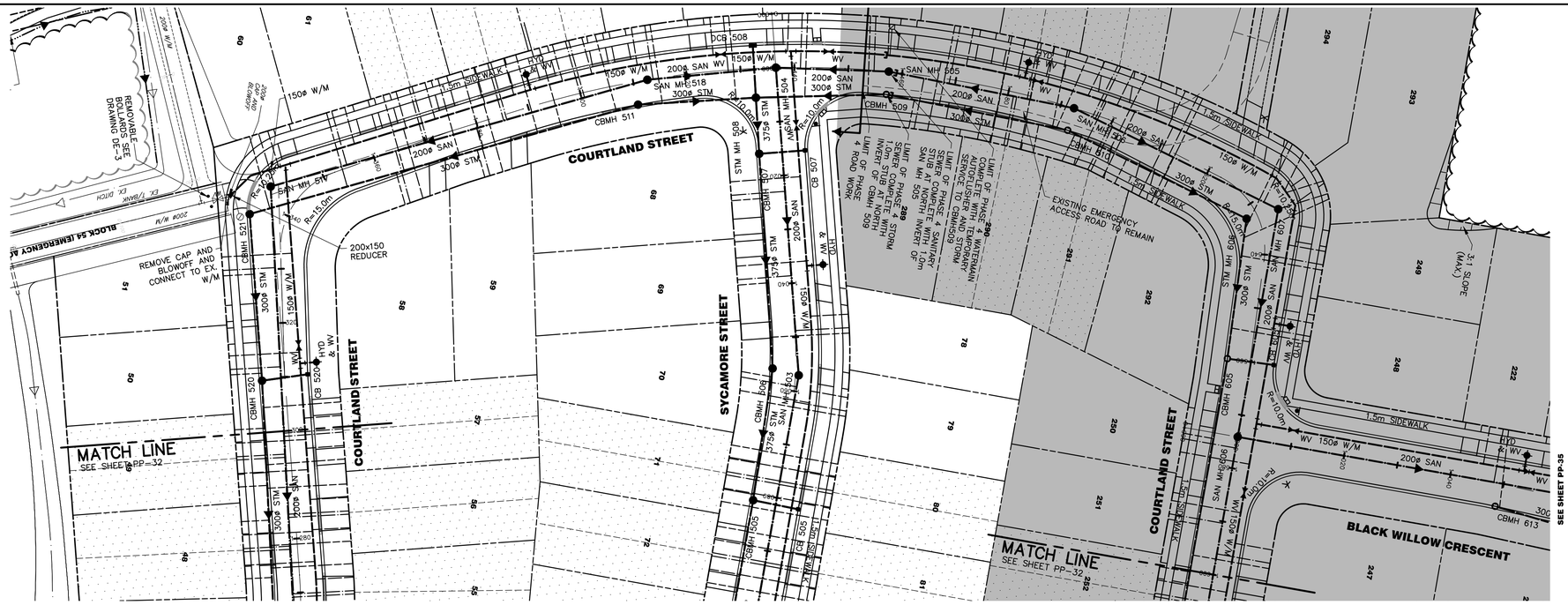
PLAN AND PROFILE
COURTLAND STREET
STA 1+000 TO 1+300

TATHAM ENGINEERING

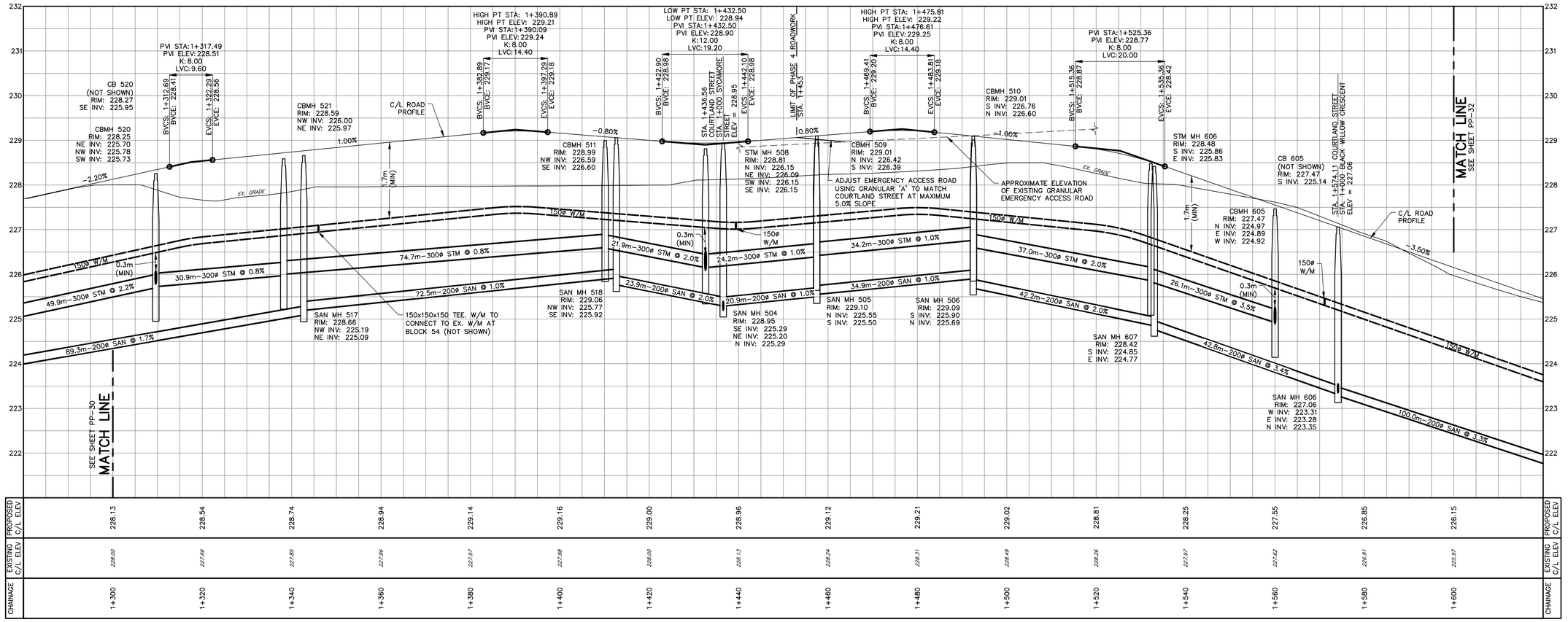
PP-30

1 : 500 HORIZ.
1 : 50 VERT.

Drawing Name: 111179-5-PP01.dwg, Plotted: Oct 11, 2019







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[redacted] 10/30/2019

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

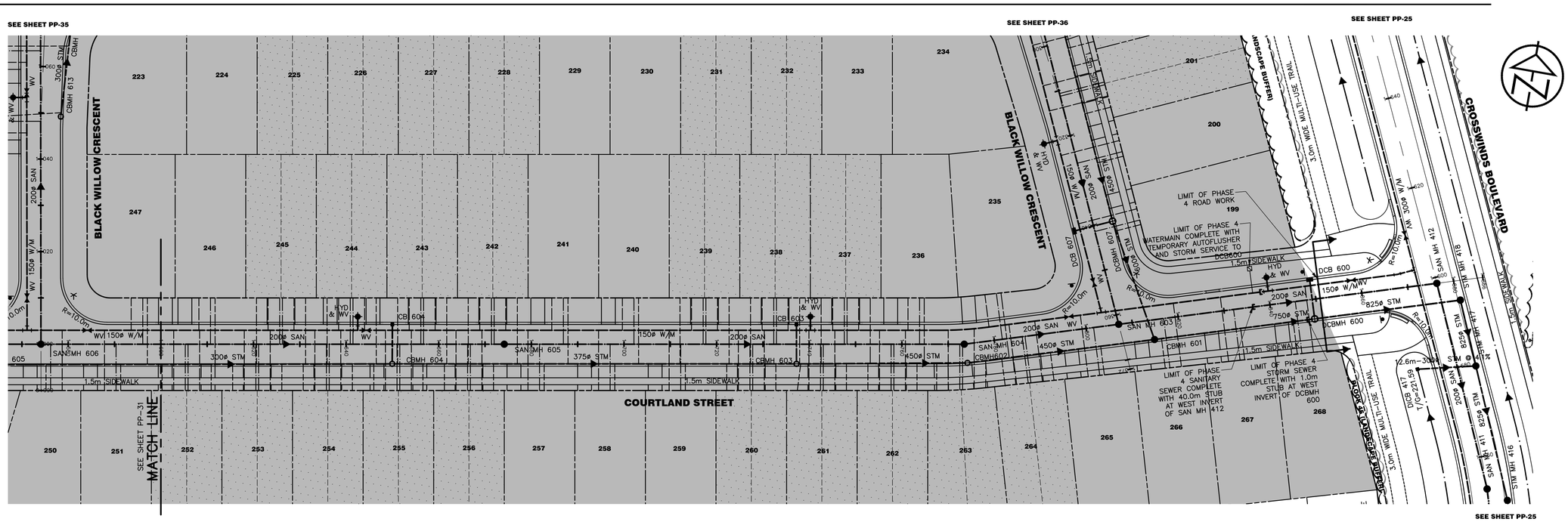
PLAN AND PROFILE
COURTLAND STREET
STA 1+300 TO 1+600

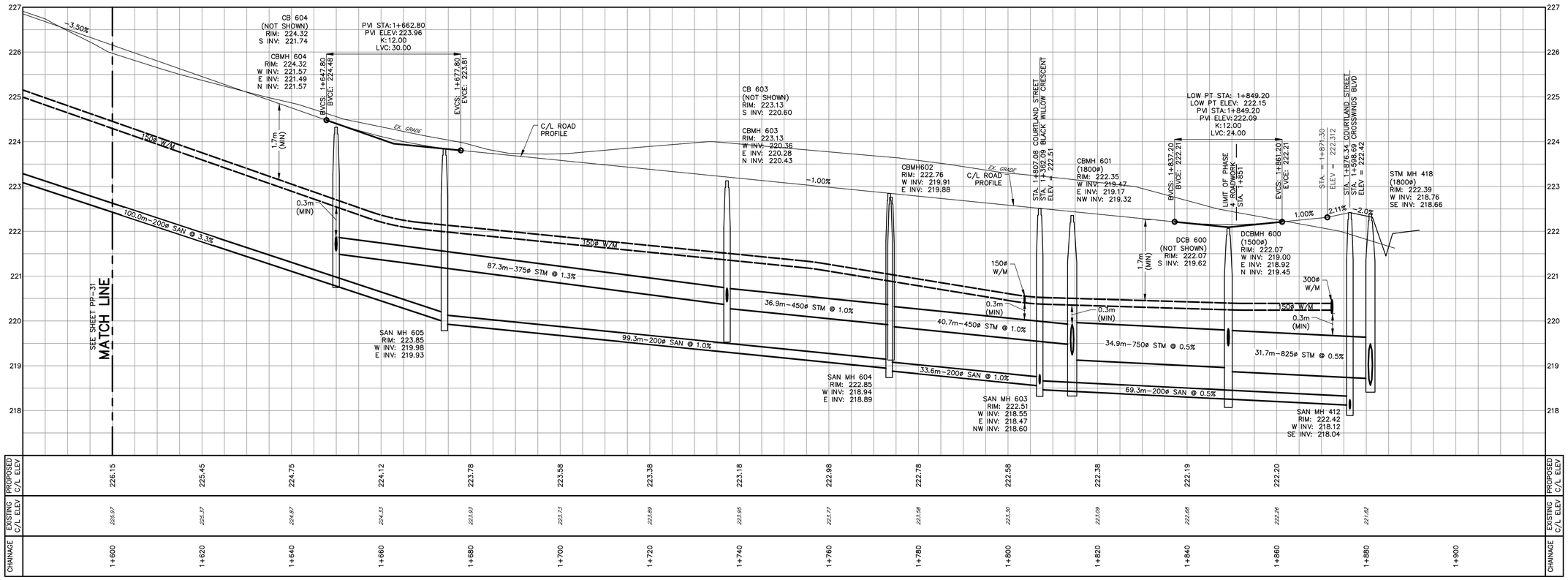
TATHAM ENGINEERING

PP-31

1 : 500 HORIZ.
1 : 50 VERT.

Drawing Name: 111179-5-PP01.dwg, Plotted: Oct 11, 2019





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SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

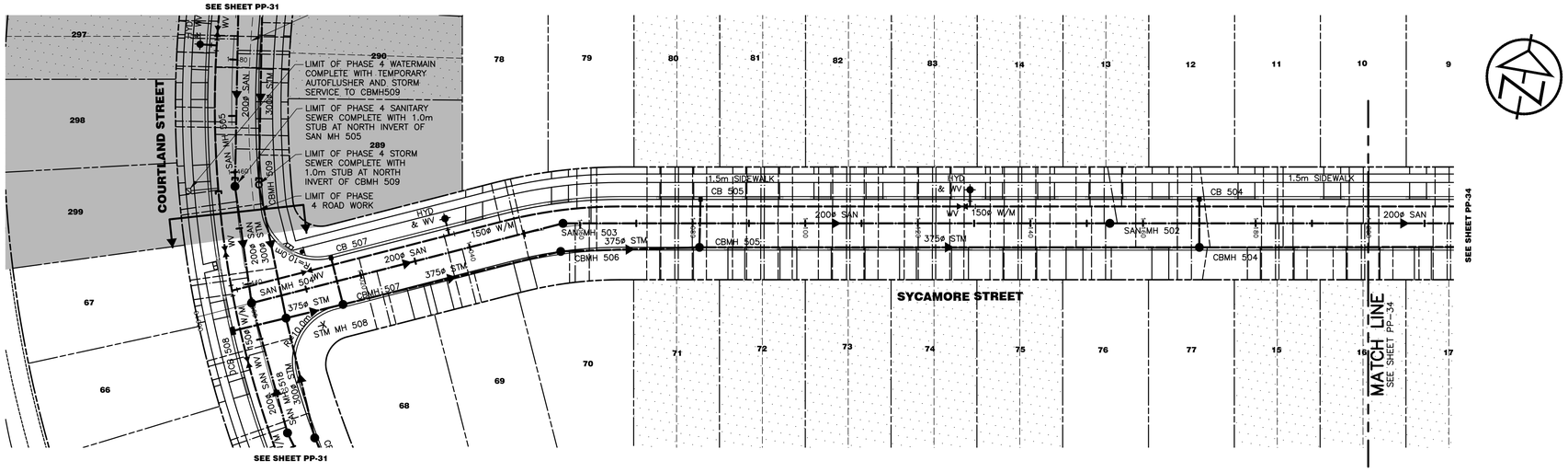
PLAN AND PROFILE COURTLAND STREET STA 1+600 TO 1+900

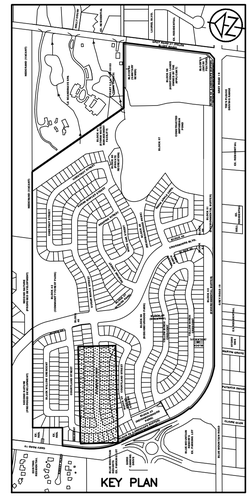
TATHAM ENGINEERING

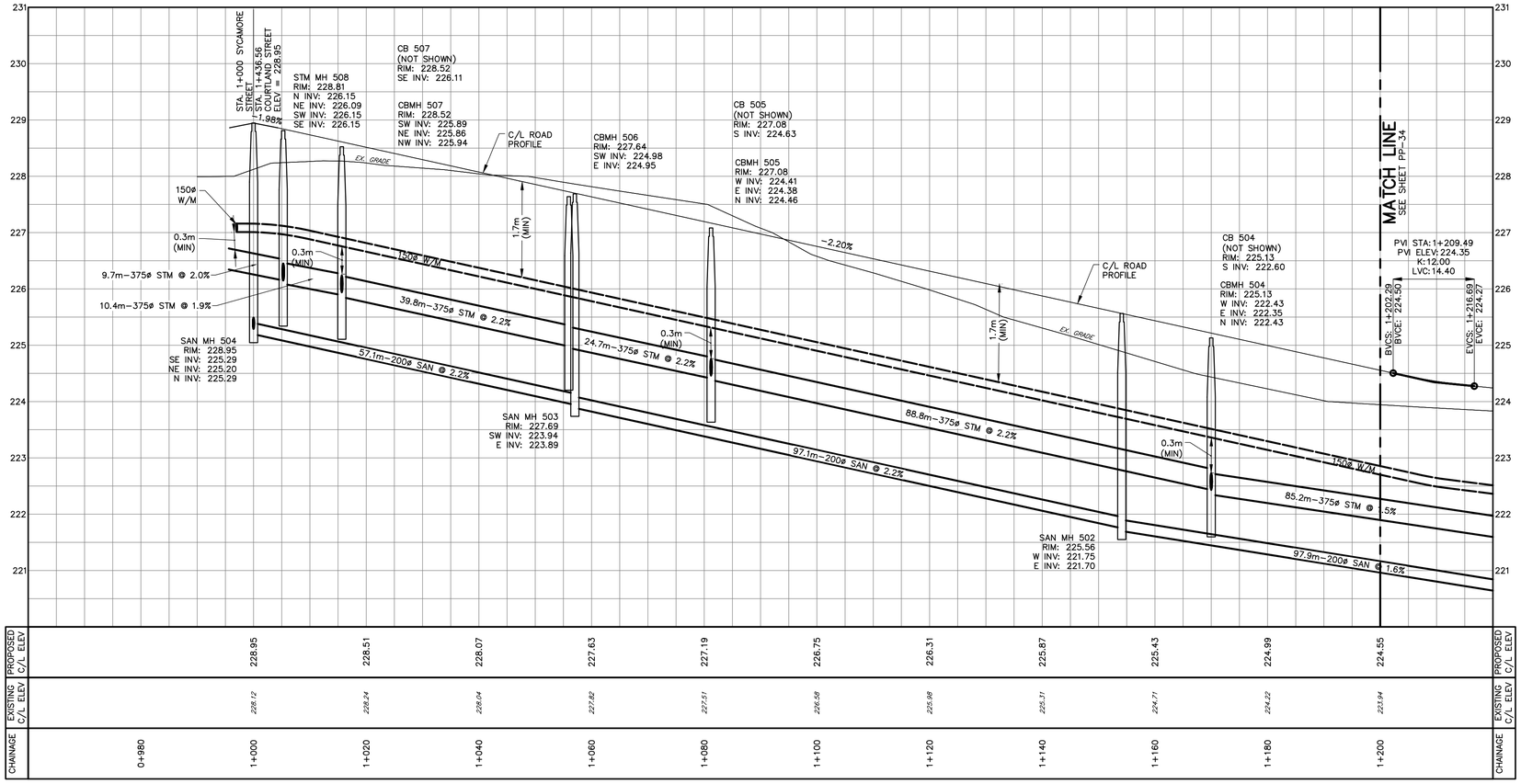
PP-32

1 : 500 HORIZ.
1 : 50 VERT.

Drawing Name: 111179-5-PP01.dwg, Plotted: Oct 11, 2019







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[redacted]

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ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

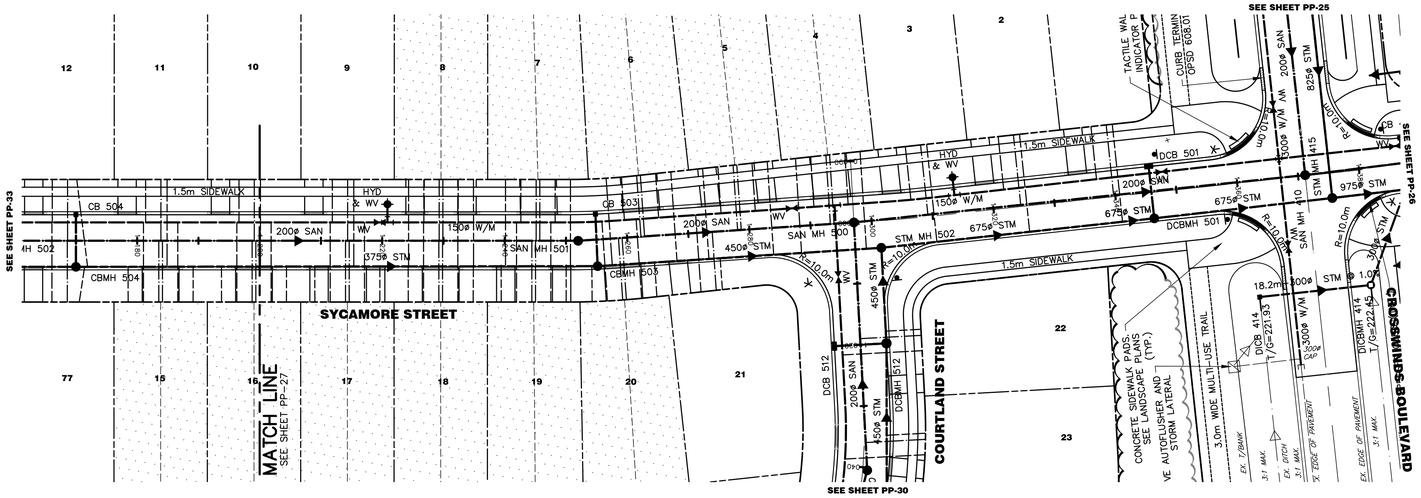
PLAN AND PROFILE
SYCAMORE STREET
STA 1+000 TO 1+200

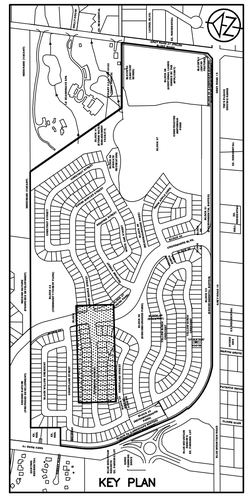
TATHAM ENGINEERING

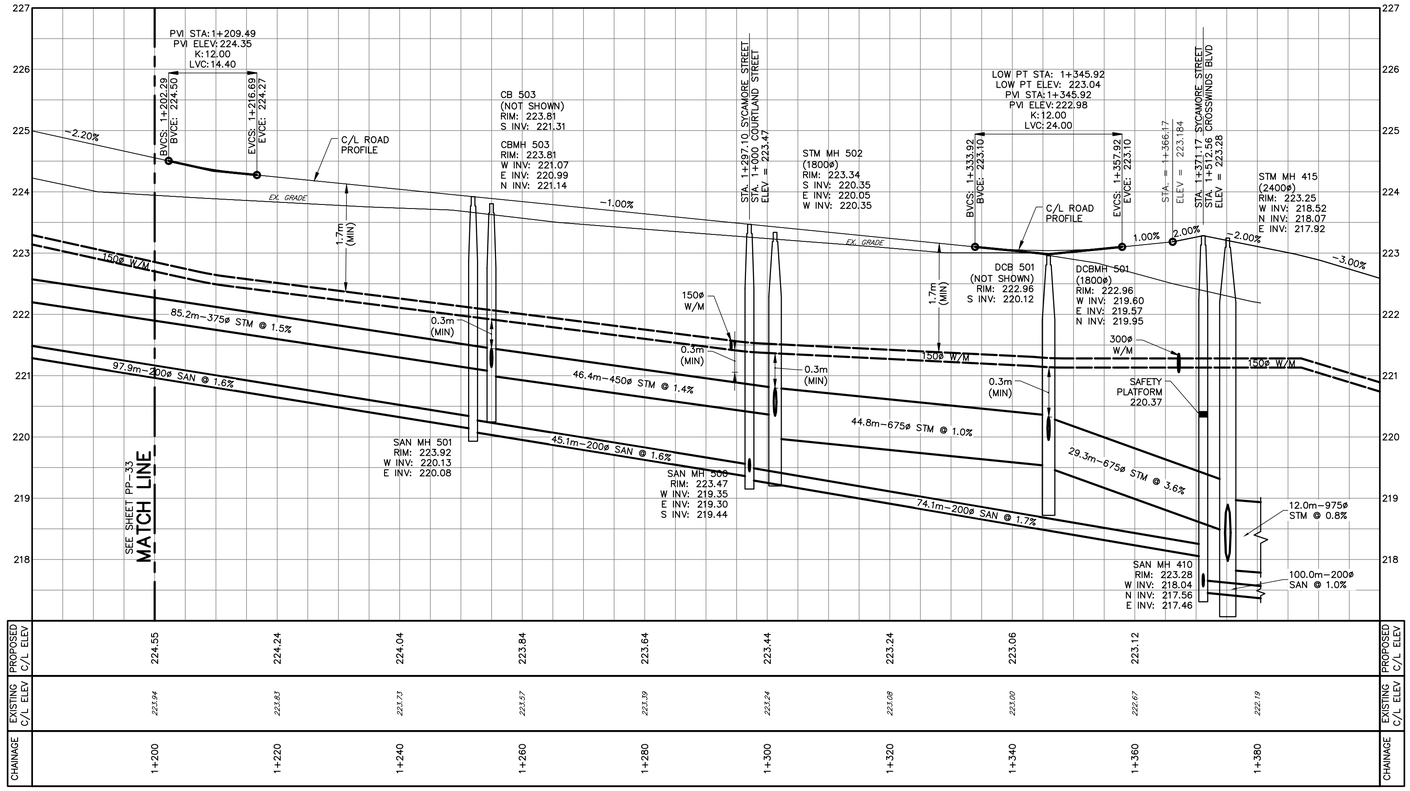
PP-33

1 : 500 HORIZ.
1 : 50 VERT.

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ENGINEER STAMP [redacted]

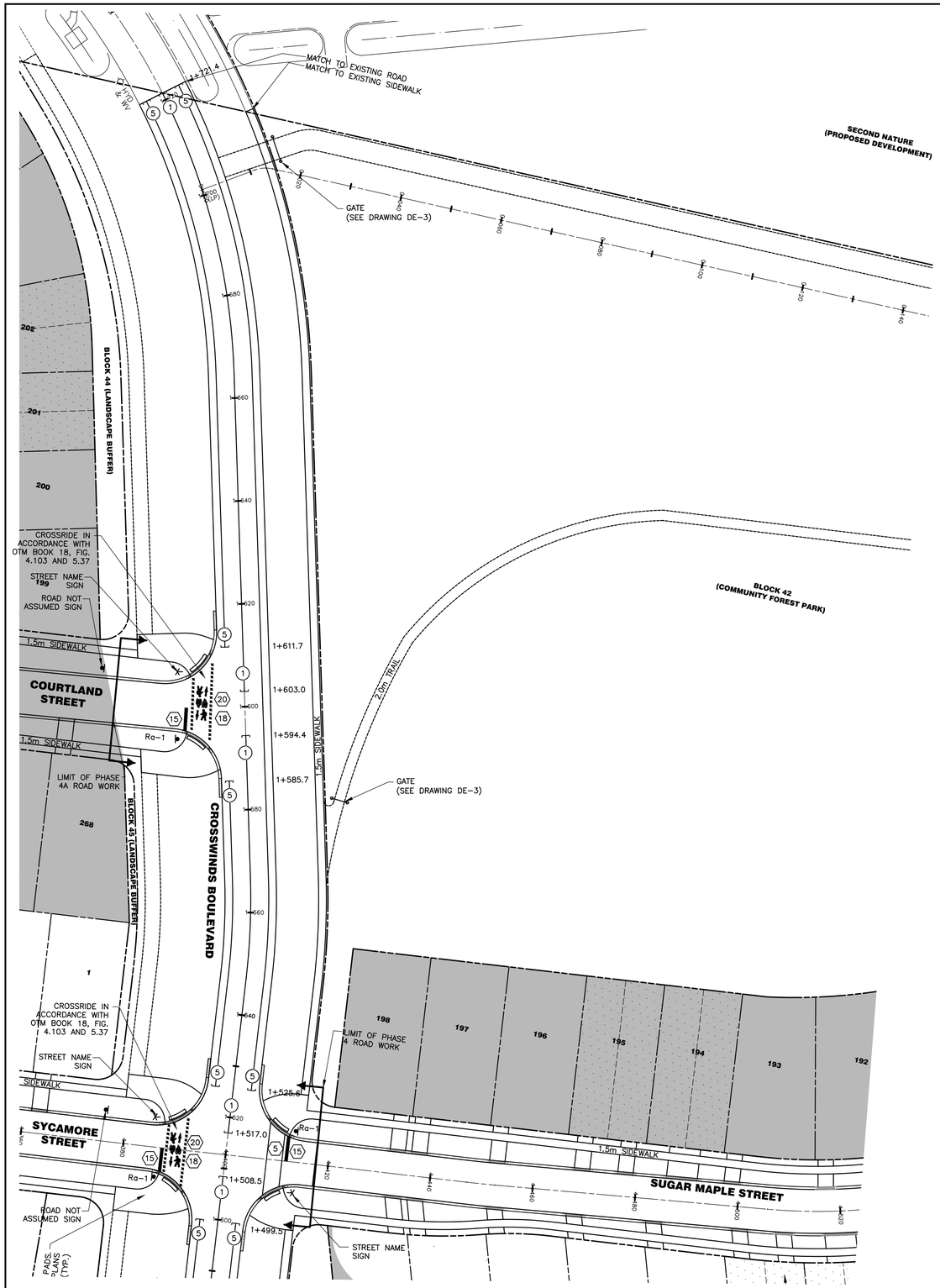
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

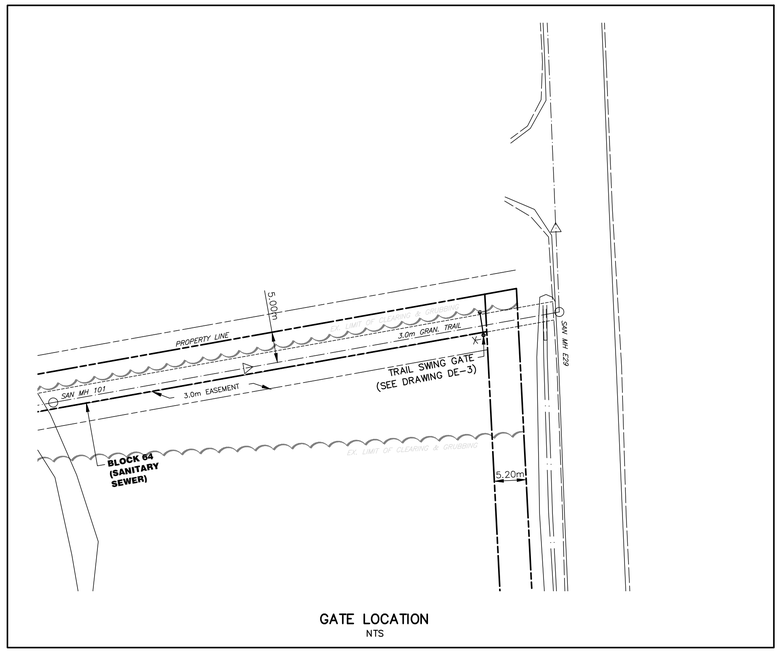
PLAN AND PROFILE
SYCAMORE STREET
STA 1+200 TO 1+380

TATHAM ENGINEERING

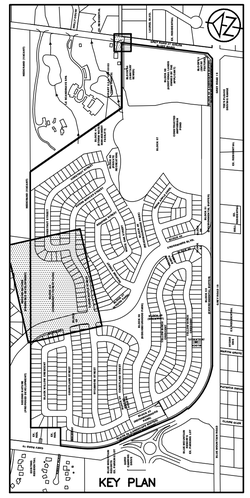
PP-34

1 : 500 HORIZ.
1 : 50 VERT.





GATE LOCATION
NTS



1	SOLID YELLOW,10cm	
2	SOLID DOUBLE YELLOW,10cm	
3	363 BROKEN YELLOW,10cm	
4	SOLID YELLOW,20cm	
5	SOLID WHITE,10cm	
6	333 BROKEN WHITE,10cm	
7	363 BROKEN WHITE,10cm	
8	393 BROKEN WHITE,10cm	
9	SOLID WHITE,20cm	
10	111 BROKEN WHITE,20cm	
11	333 BROKEN WHITE,20cm	
12	333 BROKEN WHITE,30cm	
13	SOLID WHITE,30cm	
14	SOLID WHITE,45cm	
15	SOLID WHITE,60cm	
16	1-0.6-1 WHITE,45cm	
17	1.8-1.8-1.8 WHITE,20cm	
18	0.4-0.4-0.4 WHITE,40cm	
20	SYMBOLS	
] [	LIMITS OF MARKINGS	

Ra-1
STOP

NOTES:
1. 333, 363, 393, Denotes Pavement Marking Spacing (ie., 3 m line, 3 m gap, 3 m line)
2. (1) PAVEMENT MARKING, PAINT
3. [1] PAVEMENT MARKING, TEMPORARY
4. ⚠1 PAVEMENT MARKING, TEMPORARY-REMOVABLE
5. (1) PAVEMENT MARKING, DURABLE

DISCLAIMER AND COPYRIGHT

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
2.	2ND SUBMISSION	JUNE 14/19
3.	3RD SUBMISSION	JULY 30/19
4.	4TH SUBMISSION	OCT 10/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

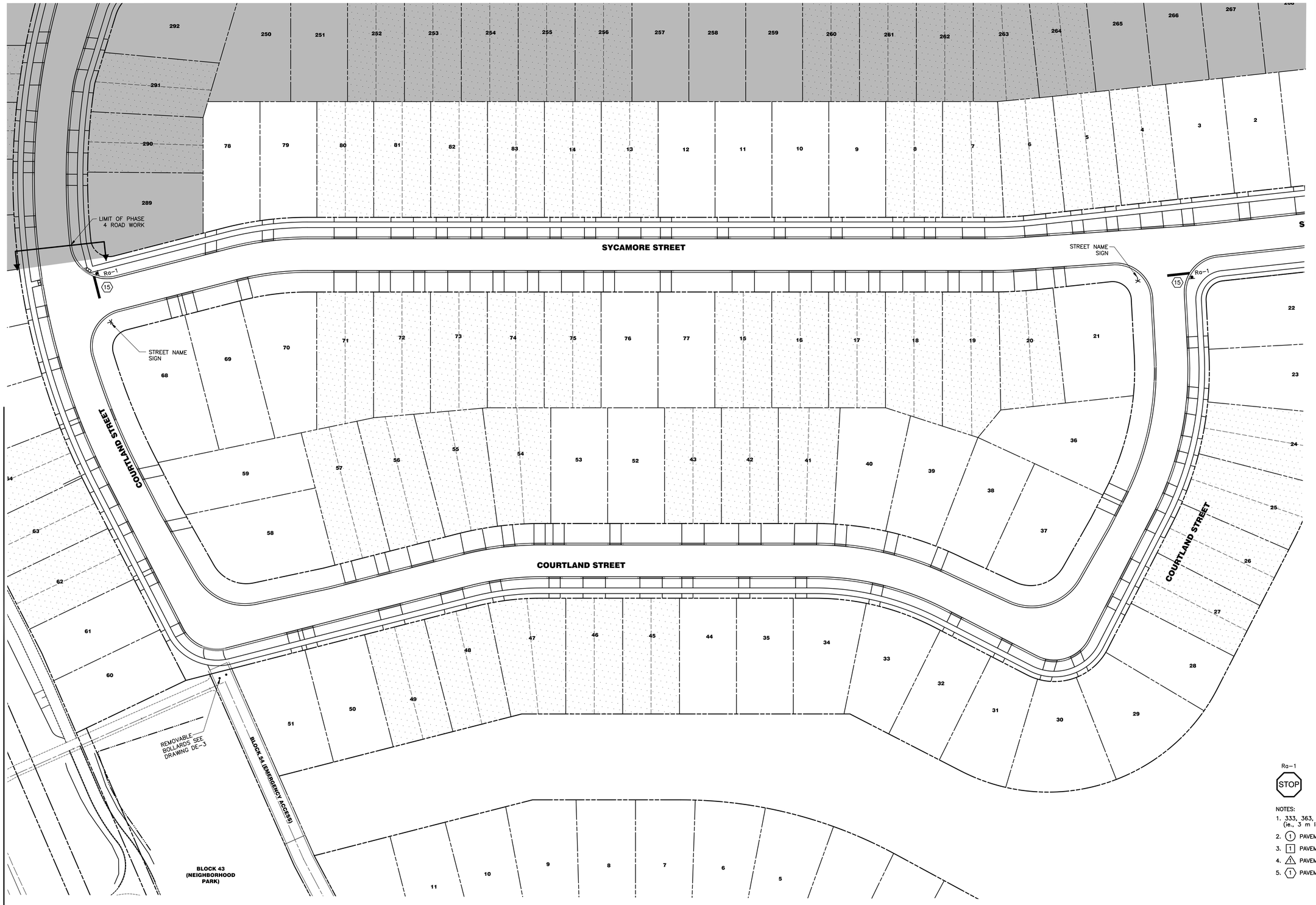
PAVEMENT MARKING AND SIGNAGE PLAN

TATHAM ENGINEERING

PM-1

1:500

Drawing Name: 111179-4-PM1.dwg, Plotted: Oct 11, 2019





1	SOLID YELLOW,10cm
2	SOLID DOUBLE YELLOW,10cm
3	363 BROKEN YELLOW,10cm
4	SOLID YELLOW,20cm
5	SOLID WHITE,10cm
6	333 BROKEN WHITE,10cm
7	363 BROKEN WHITE,10cm
8	393 BROKEN WHITE,10cm
9	SOLID WHITE,20cm
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11	333 BROKEN WHITE,20cm
12	333 BROKEN WHITE,30cm
13	SOLID WHITE,30cm
14	SOLID WHITE,45cm
15	SOLID WHITE,60cm
16	1–0.6–1 WHITE,45cm
17	1.8–1.8–1.8 WHITE,20cm
18	0.4–0.4–0.4 WHITE,40cm
20	SYMBOLS
] [	LIMITS OF MARKINGS

Ra–1
STOP

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5. (1) PAVEMENT MARKING, DURABLE

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	
1.	
2.	
3.	
4.	

REVISION DESCRIPTION	DATE
1ST SUBMISSION	DEC 5/18
2ND SUBMISSION	JUNE 14/19
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4TH SUBMISSION	OCT 10/19

[redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

PAVEMENT MARKING AND SIGNAGE PLAN

TATHAM ENGINEERING

PM-3

1:500

Drawing Name: 111179–4–PM1.dwg, Plotted: Oct 11, 2019

LIST OF BENCHMARKS

BM – ELEVATION 181.032m

CONCRETE CULVERT UNDER HIGHWAY No. 26 OVER SILVER CREEK, 1.18 km EAST OF JUNCTION OF HIGHWAY No. 26 AND COUNTY ROAD 21, 45.4 m SOUTHEAST OF CENTRE LINE OF SILVER CREEK DRIVE, TABLET WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT.

TBM 15 – ELEVATION 217.537m

NAIL & WASHER IN HYDRO POLE @ N/E CORNER OF OSLER BLUFF ROAD AND GREY ROAD 19.

TBM 16 – ELEVATION 217.986m

TOP NUT OF HYDRANT # 263, FIRST HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 17 – ELEVATION 217.320m

TOP NUT OF HYDRANT # 262, SECOND HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 18 – ELEVATION 218.708m

TOP NUT OF HYDRANT # 261, THIRD HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 19 – ELEVATION 221.484m

TOP NUT OF HYDRANT # 260, FORTH HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 20 – ELEVATION 224.089m

TOP NUT OF HYDRANT # 259, FIFTH HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 21 – ELEVATION 226.200m

TOP NUT OF HYDRANT # 258, SIXTH HYDRANT WEST OF OSLER BLUFF ROAD ON SOUTH SIDE OF GREY ROAD 19.

TBM 22 – ELEVATION 227.684m

TOP NUT OF HYDRANT # 315 AT SOUTHWEST CORNER OF MARTIN GROVE AND GREY ROAD 19.

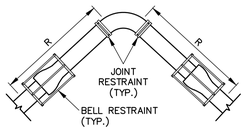


FIGURE 1
HORIZONTAL BEND

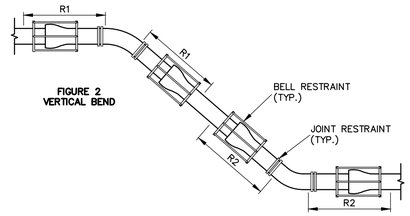


FIGURE 2
VERTICAL BEND

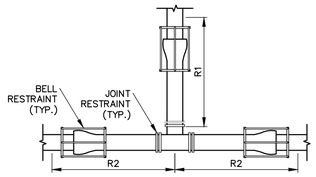


FIGURE 3
TEE

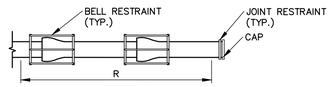


FIGURE 4
DEAD END

CHARACTERISTICS USED TO CALCULATE RESTRAINT LENGTH:

PIPE MATERIAL: PVC
SOIL TYPE: ML (SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS)
SAFETY FACTOR: 1.5 TO 1
TRENCH TYPE: 5 (PIPE BEDDED IN COMPACT GRANULAR MATERIAL)
DEPTH OF BURY: 1.8m (6 ft)
TEST PRESSURE: 1035 kPa (150 p.s.i.)

PROGRAM: SIGMA IRON – RESTRAINT LENGTH CALCULATOR 1.0

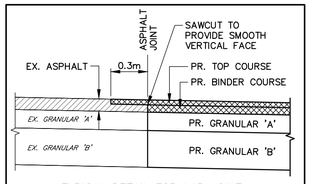
TABLE 2: PIPE RESTRAINT SCHEDULE FOR PVC TEES
(ALL JOINTS AND BELLS LOCATED WITHIN THE CALCULATED RESTRAINT LENGTH SHALL BE RESTRAINED WITH APPROVED BELL AND JOINT RESTRAINTS)

TEES			
NOMINAL PIPE DIA.	BRANCH PIPE DIA.	RESTRAINT 1 LENGTH (m)	RESTRAINT 2 LENGTH (m)
150	150	4.6	3.0
200	150	2.4	3.0
150	200	9.8	3.0
200	200	7.9	3.0
300	150	0.3	3.0
300	200	4.0	3.0
300	300	14.3	3.0

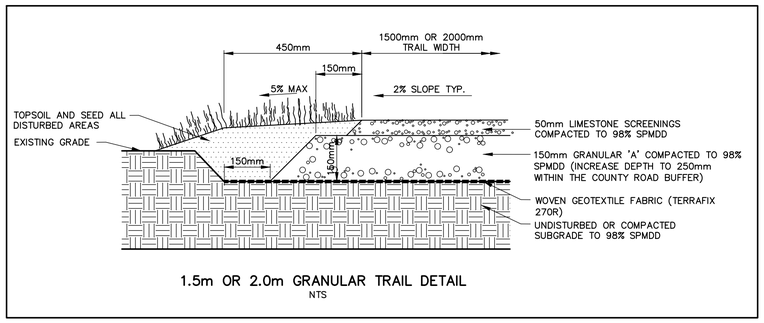
TABLE 1: PIPE RESTRAINT SCHEDULE FOR PVC PIPE
(ALL JOINTS AND BELLS LOCATED WITHIN THE CALCULATED RESTRAINT LENGTH SHALL BE RESTRAINED WITH APPROVED BELL AND JOINT RESTRAINTS)

		HORIZONTAL BEND	VERTICAL BEND		DEAD END (NO BEND ANGLE)
PIPE DIA.	BEND ANGLE	RESTRAINT LENGTH (m)	RESTRAINT 1 LENGTH (m)	RESTRAINT 2 LENGTH (m)	RESTRAINT LENGTH (m)
150ø	90°	3.7	–	–	11.6
	45°	1.6	4.9	1.5	
	22.5°	0.9	2.5	0.9	
	11°	0.6	1.3	0.6	
200ø	90°	4.6	–	–	15.0
	45°	2.2	6.1	2.2	
	22.5°	0.9	3.1	1.0	
	11°	0.6	1.6	0.6	
300ø	90°	6.4	–	–	21.4
	45°	2.8	8.9	2.8	
	22.5°	1.5	4.3	1.5	
	11°	0.9	3.4	0.9	

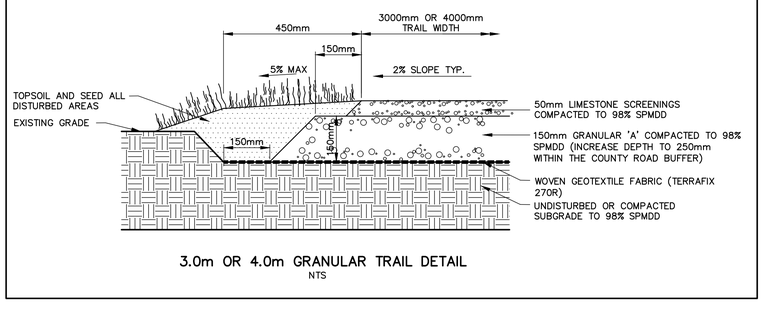
NOTES:
1. CONTRACTOR TO REPORT IN WRITING TO THE ENGINEER ANY CHANGES TO SOIL OR SITE CHARACTERISTIC THAT MAY ALTER THE PIPE RESTRAINT CALCULATION.
2. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THRUST RESTRAINT REQUIREMENTS WITH THE PIPE AND RESTRAINT MANUFACTURERS.
3. VALVES TO BE RESTRAINED AS IF THEY ARE DEAD ENDS.



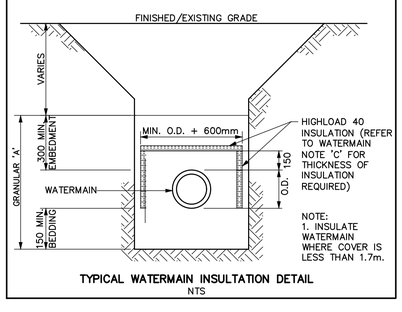
TYPICAL DETAIL FOR LAP JOINT
NTS



1.5m OR 2.0m GRANULAR TRAIL DETAIL
NTS



3.0m OR 4.0m GRANULAR TRAIL DETAIL
NTS



TYPICAL WATERMAIN INSULTATION DETAIL
NTS

GENERAL

A. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH TOWN OF THE BLUE MOUNTAINS STANDARDS AND OPS STANDARDS. WHERE CONFLICT OCCURS, TOWN STANDARDS TO GOVERN.
B. THE CONTRACTOR MUST OBTAIN A ROAD OCCUPANCY PERMIT FROM THE TOWN AND/OR COUNTRY AS NECESSARY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
C. THE OWNER'S ENGINEER SHALL PROVIDE BENCHMARK ELEVATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK.
D. ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY AN OLS AT CONTRACTOR'S EXPENSE IF REMOVED/DISTURBED DURING CONSTRUCTION.
E. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY WATER AND POWER.
F. DEWATERING TO BE CARRIED OUT IN ACCORDANCE WITH OPSS 517 AND OPSS 518. MAINTAIN ALL TRENCHES IN A DRY CONDITION. A MECP PERMIT TO TAKE WATER (PTTW) HAS BEEN OBTAINED FOR THIS PROJECT. THE CONTRACTOR SHALL ENSURE THAT ALL DEWATERING WORKS ARE IN ACCORDANCE WITH THE PERMIT.
G. ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.
H. GENERAL INSTALLATION AND TESTING OF SEWERS, WATERMAIN AND APPURTENANCES TO BE IN ACCORDANCE WITH OPSS 407, 408, 409 (CCTV), 410, 421 AND 441, AND ALL SPECIFICATIONS REFERENCED WITHIN THESE SECTIONS.
I. ALL MAINTENANCE HOLES ARE 1200 mm DIAMETER, UNLESS OTHERWISE SPECIFIED.
J. ALL STRUCTURES TO BE INSTALLED WITH FROST STRAPS TO OPSD 701.100.
K. PIPE SUPPORT AT ALL STRUCTURES TO OPSD 708.020.
L. ALL MAINTENANCE HOLE AND CATCH BASIN FRAME AND GRATES TO BE SET TO BASE COURSE ASPHALT ELEVATION IN ACCORDANCE WITH OPSD 704.010. FRAME AND GRATES TO BE RAISED TO FINISHED GRADE PRIOR TO THE PLACEMENT OF SURFACE COURSE ASPHALT USING CONCRETE ADJUSTMENT UNITS. MAXIMUM COMBINED HEIGHT OF ADJUSTMENT UNITS SHALL BE 450 mm.
M. TRENCH BACKFILL TO BE SELECT NATIVE MATERIAL OR IMPORTED SELECT SUBGRADE MATERIAL TO OPSS 1010. BACKFILL TO BE PLACED IN MAXIMUM 200 mm THICK LIFTS (OR AS OTHERWISE DIRECTED BY THE GEOTECHNICAL CONSULTANT) AND COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD).
N. PIPE EMBEDMENT TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. BACKFILL AND EMBEDMENT TO OPSD 802.010 (FLEXIBLE PIPE), GRANULAR 'A' EMBEDMENT OR OPSD 802.031 (RIGID PIPE) CLASS 'B', GRANULAR 'A' BEDDING, GRANULAR 'B' COVER (MAX. AGGREGATE SIZE 25 mm). MINIMUM BEDDING DEPTH 150 mm, MINIMUM COVER DEPTH 300 mm ON ALL PIPES. WHERE EXCESSIVELY WET OR POOR SUBGRADE IS ENCOUNTERED AT THE INVERT LEVEL, IT MAY BE NECESSARY TO INCREASE THE BEDDING THICKNESS.
O. CLEAR STONE COMPLETELY WRAPPED IN FILTER FABRIC MAY BE SUBSTITUTED FOR EMBEDMENT MATERIAL IF APPROVED BY THE ENGINEER.
P. DISTURBED AREAS TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER.
Q. REINSTATEMENT OF ALL DISTURBED BOULEVARDS AND DITCHES TO INCLUDE REGRADING, PLACEMENT OF TOPSOIL AND SEED/SOD IN ACCORDANCE WITH DWG. DE–3 CROSS–SECTION NOTES, OPSS 802 AND OPSS 803. SOD TO BE STAKED WHERE NECESSARY TO AVOID MOVEMENT.
R. THE CONTRACTOR IS RESPONSIBLE FOR THE PRESERVATION OF ALL EXISTING INFRASTRUCTURE/FACILITIES AS WELL AS NOTIFYING ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK AND CO–ORDINATE CONSTRUCTION ACCORDINGLY.
S. ALL ON–SITE MATERIAL SHALL BE PROPERLY STORED, SECURED, MONITORED AND COVERED AS REQUIRED. SPECIFICALLY, ALL PVC PIPE SHALL BE COVERED WHILE STORED ON–SITE.
T. ALL SIGNAGE TO COMPLY WITH THE TOWN OF THE BLUE MOUNTAINS SIGN BY–LAW.
U. REFER TO LANDSCAPE PLANS FOR TREE CLEARING AND TREE PROTECTION.
V. HAZARDOUS TREE REMOVAL IS TO BE COMPLETED ALONG ANY WALKING PATHS OR TRAILS, LEANING OR BACKING ONTO INDIVIDUAL LOTS, OR ADJACENT TO ANY DITCHES OR ANY PROPOSED DITCHES TO A MINIMUM OF 6.0m FROM PROPERTY LINES, TRAILS, AND DITCHES. TREES THAT HAVE BEEN UNDERMINED OR HAVE HAD ITS ROOTS EXPOSED DURING CONSTRUCTION MAY BECOME A HAZARDOUS TREE AND MUST ALSO BE REMOVED.
W. THE MINIMUM COVER OVER ALL CULVERTS SHALL BE 0.3m IN ACCORDANCE WITH TOWN STANDARDS OR AS REQUIRED IN ACCORDANCE WITH MANUFACTURING GUIDELINES. THE GREATER SHALL GOVERN.
X. THE MINIMUM COVER OVER ALL UTILITIES SHALL BE 0.9m IN ACCORDANCE WITH TOWN STANDARDS OR AS REQUIRED BY UTILITY PROVIDER. THE GREATER SHALL GOVERN.

ROADS

A. SUBGRADE AND BOULEVARD MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. SUBGRADE TO BE PROOF ROLLED WITH THE TOWN AND GEOTECHNICAL REPRESENTATIVE PRESENT PRIOR TO PLACING GRANULAR 'B'.
B. LIMESTONE SCREENINGS, GRANULAR 'A' AND 'B' TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 100% OF THE MATERIAL'S RESPECTIVE SPMDD.
C. ASPHALT TO BE COMPACTED TO A MINIMUM OF 92% OF THE MARSHALL MAXIMUM RELATIVE DENSITY (M.R.D).
D. ROADWAYS WITHIN MUNICIPAL RIGHT–OF–WAY TO BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE ROAD CROSS–SECTIONS.
E. JOINTS WITH EXISTING ASPHALT TO BE SAW CUT STRAIGHT PRIOR TO PLACING NEW ASPHALT. WHERE EXISTING ASPHALT IS THICKER THAN 75 mm, A 300 mm WIDE LAP JOINT SHALL BE GROUND INTO EXISTING ASPHALT PRIOR TO THE PLACEMENT OF SURFACE COURSE ASPHALT (SEE DETAIL).
F. ALL GRANULAR AND ASPHALT MATERIAL TO BE PLACED IN ACCORDANCE WITH OPSS 310 AND OPSS 314.
G. STOP SIGNS AND STREET SIGNS TO BE SUPPLIED AND INSTALLED PER TOWN STANDARDS.
H. TACK COAT TO BE APPLIED BETWEEN BASE AND TOP COURSE ASPHALT.
I. CONCRETE CURB AND GUTTER TO OPSD 600.040 AND OPSD 600.110 – AS SPECIFIED, AND OPSS 353. CURB DEPRESSIONS AT SIDEWALK CROSSINGS IN ACCORDANCE WITH OPSD 310.033. DEPRESSIONS AT DRIVEWAYS IN ACCORDANCE WITH OPSD 351.010, THE MAXIMUM WIDTH SHALL BE IN ACCORDANCE WITH TOWN BYLAW 2014–48.
J. CONCRETE CURB TERMINATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH OPSD 608.010.
K. CONCRETE SIDEWALK TO OPSD 310.010, CONCRETE SIDEWALK RAMPS TO OPSD 310.033 AND OPSS 351. SUBBASE TO CONSIST OF 150 mm DEPTH GRANULAR 'A'.
L. UNPAINTED CAST IRON TACTILE WALKING SURFACE INDICATOR COMPONENTS TO BE IN ACCORDANCE WITH OPSD 310.039
M. 100 mm DIAMETER PIPE SUBDRAINS SHALL BE PROVIDED ON BOTH SIDES OF THE ROAD IN ACCORDANCE WITH OPSS 405 AND OPSD 216.021, UNWRAPPED TRENCH, GRANULAR 'A' EMBEDMENT.
N. SUBDRAINS TO BE PERFORATED, COMPLETE WITH FILTER SOCK, OTHER THAN THE 2.0 m SECTION IMMEDIATELY UPSTREAM OF ALL STRUCTURES WHICH SHALL BE NON–PERFORATED.
O. All ROADWAY CULVERTS TO HAVE FROST TREATMENT AS PER OPSD 803.031.
P. SURFACE ASPHALT SHALL BE COMPLETED IN A SINGLE MOBILIZATION FOR THE ENTIRE PHASE.
Q. DESIGN SPEED FOR LOCAL STREETS WITHIN WINDFALL SUBDIVISION IS 50Km/h. DESIGN SPEED FOR CROSSWINDS BOULEVARD IS 60Km/h.
R. POND MAINTENANCE ACCESS GATES AND TRAIL ACCESS GATES AS PER DETAIL ON DE–3.

STORM SEWER

A. MAINTENANCE HOLES AND CATCH BASIN MAINTENANCE HOLES TO OPSD 701.010, 701.011, 701.012, 701.013, 701.014, AND 701.015.
B. MAINTENANCE HOLES TO BE BENCHED TO OPSD 701.021. MINIMUM BENCHING WIDTH SHALL BE 230 mm. CATCH BASIN MAINTENANCE HOLES TO HAVE A SUMP PER OPSD 701.010.
C. MAINTENANCE HOLE AND CATCH BASIN MAINTENANCE HOLE STEPS TO OPSD 405.010.
D. MAINTENANCE HOLE FRAMES AND GRATES TO OPSD 401.010 TYPE 'A' CLOSED COVER.
E. CATCH BASINS, DOUBLE CATCH BASINS AND REAR LOT CATCH BASINS TO OPSD 705.010 AND 705.020. ROADSIDE CATCH BASINS TO HAVE A SUMP. REAR LOT CATCH BASINS TO BE BENCHED.
F. DITCH INLET CATCH BASINS TO OPSD 705.030. DITCH INLET CATCH BASIN GRATES TO OPSD 403.010, 3:1 GRATE UNLESS OTHERWISE SPECIFIED.
G. CATCH BASIN AND CATCH BASIN MAINTENANCE HOLE FRAMES AND GRATES TO OPSD 400.020. FRAME AND GRATES TO BE INSTALLED IN THE CURB LINE TO OPSS 610.010.
H. CATCH BASIN LEADS – 300 mm DIAMETER SINGLE AND 375 mm DIAMETER DOUBLE. CATCH BASIN CONNECTIONS TO OPSD 708.010 AND OPSD 708.030.
I. RESIDENTIAL STORM SERVICE CONNECTIONS TO TOWN STD. DRAWING ST–STD–SUMP, 100 mm DIAMETER, GRANULAR 'A' EMBEDMENT (MIN. 150 mm BEDDING AND 300 mm COVER), USING PREMANUFACTURED CONNECTIONS TO THE MAIN. TERMINATE AT PROPERTY LINE WHERE SHOWN C/W A CAP/PLUG AND A 38 mm X 89 mm MARKER PLACED FROM THE INVERT TO 600 mm ABOVE FINISHED GRADE PAINTED WHITE. MINIMUM GRADE TO BE 1.0%. TERMINATE AT AN OBVERT ELEVATION AT LEAST 1.4 m BELOW PROPOSED GRADE AT PROPERTY LINE.
J. STUBS FOR PVC STORM SEWERS TO BE MIN. 1.0m LONG COMPLETE WITH PRE–MANUFACURED CAP. STUBS FOR CONCRETE STORM SEWERS TO BE MIN. 1 PIPE LENGTH (+/– 2.44m) COMPLETE WITH PRE–MANUFACTURED CAP.
K. DROP STRUCTURES AT MAINTENANCE HOLES TO OPSD 1003.020.
L. ALL ROADWAY CULVERTS TO HAVE FROST TREATMENT AS PER OPSD 803.031.

SANITARY SEWER

A. MAINTENANCE HOLES TO OPSD 701.010.
B. MAINTENANCE HOLES TO BE BENCHED TO OPSD 701.021 ALL CONNECTIONS TO MAINTENANCE HOLES TO INCLUDE KOR–N–SEAL RUBBER BOOT PIPE CONNECTION.
C. MAINTENANCE HOLE STEPS TO OPSD 405.010
D. MAINTENANCE HOLE FRAME AND COVER TO OPSD 401.010 TYPE 'A' CLOSED COVER. WHERE SPECIFIED, WATER TIGHT FRAME AND GRATE TO OPSD 401.050 SHALL BE USED.
E. MAINTENANCE HOLE STRUCTURES EXCEEDING 5.0m IN DEPTH TO INCLUDE SAFETY PLATFORM TO OPSD 404.020.
F. DROP STRUCTURES AT MAINTENANCE HOLES TO OPSD 1003.020.
G. RESIDENTIAL SERVICE CONNECTIONS TO OPSD 1006.020, 125 mm DIAMETER, GRANULAR 'A' EMBEDMENT (MIN. 150 mm BEDDING AND 300 mm COVER). RADIUS BENDS TO BE USED ON ALL SEWER CONNECTIONS WHERE THE ANGLE OF CONNECTION BETWEEN THE SERVICE AND SEWER EXCEEDS 90°.
H. RESIDENTIAL SERVICE CONNECTIONS TO BE TERMINATED AT THE PROPERTY LINE WITH A WATER TIGHT CAP, 125 mm x 100 mm REDUCER, PLUG SUITABLY BRACED TO WITHSTAND TEST PRESSURES AND AN 38mm x 89mm MARKER PLACED FROM THE INVERT OF THE CONNECTION TO 600 mm ABOVE FINISHED GRADE PAINTED GREEN. MINIMUM GRADE OF SERVICE TO BE 2%, MAXIMUM GRADE TO BE 8%. TERMINATE AT AN ELEVATION AT LEAST 2.8 m BELOW PROPOSED GRADE AT PROPERTY LINE.
I. STUBS FOR FUTURE SANITARY SEWERS TO BE MIN. 1.0 m LONG COMPLETE WITH PRE–MANUFACTURED CAP.

WATERMAIN

A. ALL WORK ON EXISTING WATERMAIN TO BE COORDINATED WITH THE TOWN. TOWN TO BE PROVIDED WITH PRELIMINARY SCHEDULE AND 48 HOURS NOTICE.
B. MINIMUM GROUND COVER OVER WATERMAIN, SERVICE LATERALS AND HYDRANT LEADS TO BE 1.7m AT ALL POINTS, MAXIMUM GROUND COVER OVER WATERMAIN TO BE 2.5 m.
C. INSULATION TO BE INSTALLED OVER WATERMAIN OR SERVICES WITH LESS THAN 1.7m DEPTH OF COVER AS NOTED ON THE DRAWINGS OR MINIMUM AS FOLLOWS:
DEPTH OF COVER BETWEEN 1.4 TO 1.7m REQUIRES 50mm INSULATION.
DEPTH OF COVER BETWEEN 1.2 TO 1.7m REQUIRES 100mm INSULATION.
D. WATERMAIN NOT TO BE INSTALLED WITH LESS THAN 1.2 METRES DEPTH OF COVER.
E. PIPE RESTRAINTS TO BE PROVIDED AT ALL CHANGES IN PIPE DIRECTION, TERMINATIONS AND ANY LOCATION WHERE THRUST PRESSURES MAY OCCUR. WATER VALVES SHALL BE RESTRAINED ON EITHER SIDE TO THE SAME STANDARD THAT A DEAD END WOULD BE. WHERE SOIL CONDITIONS ARE SUSPECT, SUCH AS IN DISTURBED SOILS OR SOILS WITH BEARING STRENGTH OF LESS THAN 200 kPa, PIPE RESTRAINERS SHALL BE USED. IN LIEU OF THRUST BLOCKS PIPE RESTRAINTS FOR PVC SHALL BE PER TOWN STANDARDS, INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS (SEE CHART). THREADED ROD IN JOINT RESTRAINT IS NOT PERMISSIBLE.
F. CATHODIC PROTECTION OF ALL WATERMAIN FITTINGS AND APPURTENANCES TO BE PROVIDED AS PER TOWN STANDARD (SEE CHART).
G. RESIDENTIAL SERVICE CONNECTIONS TO OPSD 1104.010, 25 mm DIAMETER, 300 mm DEPTH GRANULAR 'A' EMBEDMENT.
H. RESIDENTIAL SERVICE CONNECTIONS TO TERMINATE AT PROPERTY LINE COMPLETE WITH CURB STOP VALVE, TESTING TAIL TO SURFACE CAPPED OR CRIMPED AND A 38mm x 89mm MARKER FROM THE INVERT OF THE SERVICE TO 600 mm ABOVE GRADE PAINTED BLUE.
I. ALL WATER SERVICES TO INCLUDE THE INSTALLATION OF AN INDIVIDUAL PRV WITHIN EACH BUILDING. PRV TO BE SUPPLIED AND INSTALLED BY THE BUILDER DURING HOUSE CONSTRUCTION.
J. HYDRANTS TO BE INSTALLED TO OPSD 1105.010.
K. HYDRANTS TO BE PAINTED CHROME YELLOW AND INCLUDE A FLEXSTAKE HYDRANT MARKER MODEL FHV804, 1.2 m LONG, COLOUR YELLOW WITH REFLECTIVE GRAPHIC ON BOTH SIDES AT THE TOP OF THE MARKER. MARKER TO BE POSITIONED ON THE RIGHT PORT AS VIEWED FROM THE STREET. A FIRE HYDRANT MARKER POST AND SIGN SHALL BE INSTALLED 0.3 m BEHIND EACH HYDRANT. THE SIGN SHALL BE REFLECTIVE WITH A RED HYDRANT ON A WHITE BACKGROUND AND MEASURE 0.3 x 0.3 m (OR APPROVED EQUAL). THE SIGN SHALL BE MOUNTED 1.5 m ABOVE GRADE.
L. ALL PVC WATERMAIN AND PE RESIDENTIAL SERVICES TO HAVE TRACER WIRE BETWEEN HYDRANTS AND OTHER CONDUCTING APPURTENANCES. CONTRACTOR SHALL TEST ALL TRACER WIRE TO CONFIRM CONNECTIVITY.
M. TRACER WIRE TO BE 10 GAUGE, MULTI–STRAND SHALL BE PLACED ON TOP AND ATTACHED IN TWO PLACES ON EACH LENGTH OF PVC OR PE PIPE. ALL CONNECTIONS SHALL BE MADE WITH "DRYCONN WATERPROOF CONNECTORS" OR APPROVED EQUAL.
N. VERTICAL CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE A MINIMUM OF 0.5m WHEN WATERMAIN IS BELOW THE SEWERS, HORIZONTAL CLEARANCE BETWEEN WATERMAINS AND SEWERS TO BE A MINIMUM OF 2.5m.
O. THE COMPLETE WATER SYSTEM, INCLUDING RESIDENTIAL SERVICE CONNECTIONS TO THE PROPERTY LINE AND HYDRANTS SHALL BE TESTED IN ACCORDANCE WITH THE TOWN'S WATERMAIN COMMISSIONING PROTOCOL. CONTRACTOR TO PROVIDE DETAILED WRITTEN WATERMAIN COMMISSIONING PROTOCOL FOR APPROVAL PRIOR TO COMMENCING TESTING OPERATIONS. CONNECTIONS TO EXISTING MAINS SHALL NOT BE MADE UNTIL WRITTEN AUTHORIZATION IS PROVIDED BY THE ENGINEER AND THE TOWN.
P. DURING CHLORINATION OR DECHLORINATION, CONTRACTOR SHALL OPERATE EACH SERVICE TO VERIFY FULL FLOW AND PRESSURE AT CURB STOP TO SATISFACTION OF THE ENGINEER.
Q. EXISTING WATER SERVICES THAT ARE TO BE ABANDONED MUST BE CAPPED AT MAIN INCLUDING MAIN STOP REMOVED, PLUG INSERTED TO TOWN STANDARDS AND REINSTATEMENT OF ALL DISTURBED AREAS TO EXISTING CONDITION OR BETTER.
R. WATER VALVES TO BE OPERATED BY TOWN STAFF ONLY.
S. ALL WATER USED IN COMMISSIONING AND TESTING TO BE POTABLE AND SUPPLIED FROM THE TOWN OF THE BLUE MOUNTAINS, THE TOWN OF COLLINGWOOD OR THE MUNICIPALITY OF MEAFORD.

MATERIALS

A. ALL MATERIAL TO COMPLY WITH CSA, OPSS AND TOWN STANDARDS.
B. SANITARY SEWER – PVC DR 35.
C. SANITARY SERVICE CONNECTIONS – PVC SDR 28.
D. STORM SEWER – PVC SDR 35 OR CONCRETE 65–D. ALL SEWERS TO BE JOINED WITH A GASKETED BALL AND SPIGOT SYSTEM. NON–REINFORCED CONCRETE PIPE MAY BE USED FOR SIZES UP TO AND INCLUDING 375 mm DIA. REINFORCED CONCRETE PIPE MAY BE USED FOR ALL SIZES OF SEWER.
E. STORM SERVICE CONNECTIONS – PVC SDR 28, COLOUR WHITE.
F. CULVERTS – GALVANIZED CORRUGATED STEEL PIPE. MIN. WALL THICKNESS 2.0 mm UNLESS OTHERWISE NOTED. ALL CULVERTS TO HAVE END PROTECTION TO OPSD 810.010 (BOTH ENDS), TYPE B – COMPLETE WITH FILTER FABRIC.
G. PERFORATED SUBDRAIN – BIG 'O' WITH GEOTEXTILE FILTER SOCK OR APPROVED EQUAL.
H. ALL CHEMICALS AND MATERIALS USED IN THE ALTERATION OR OPERATION OF THE DRINKING WATER SYSTEM THAT COME IN CONTACT WITH WATER WITHIN THE SYSTEM SHALL MEET ALL APPLICABLE STANDARDS SET BY BOTH THE AMERICAN WATER WORKS ASSOCIATION ("AWWA") AND THE AMERICAN NATIONAL STANDARDS INSTITUTE ("ANSI") SAFETY CRITERIA STANDARDS NSF/60, NSF/61 AND NSF372.
I. WATERMAIN – PVC DR 18.
J. WATER SERVICE CONNECTIONS TO BE TYPE 'K' COPPER PIPE, REHAU'S MUNICIPLEX (BLUE) OR SERIES 160 PE.
K. WATER SERVICE FITTINGS SHALL BE:
MAIN STOP – MUELLER H25008
CURB STOP – MUELLER H25209
SERVICE SADDLE – ROBAR 2706 DOUBLE STRAP
TAPPING SADDLE – ROBAR 6906
SERVICE BOXES – MUELLER A–726, STAINLESS STEEL RODS
L. PIPE RESTRAINERS – SIGMA C–900.
M. HYDRANTS – CANADA VALVE OR CLOW D67 CONCORD PREMIER, OPEN LEFT, WITH STORTZ CONNECTIONS ON ALL STEAMER PORTS. HYDRANT SETS SHALL BE INSTALLED NOT LESS THAN 0.9 m FROM THE CENTER OF THE VALVE TO THE CENTER OF THE HYDRANT. TRACER WIRE SHALL BE ATTACHED TO THE OUTSIDE OF THE VALVE BOX AND WIRE BROUGHT INTO VALVE BOX UNDER CAP.
N. LIVE TAP SADDLES TO BE EPOXY COATED COMPLETE WITH STAINLESS STEEL BOLTS.
O. MECHANICAL JOINT DUCTILE FITTINGS TO AWWA/ANSI C153/A21.53. INCLUDING PROTECTO–CAPS, CAT NO. 175P190 OR APPROVED EQUAL.
P. ISOLATION VALVES TO BE RESILIENT SEAT GATE VALVES WITH MECHANICAL JOINTS, OPEN LEFT, CLOW OR MUELLER. VALVE BOXES TO BE 5–SL–48 SLIDING OR MUELLER MVB COMPOSITE COMPLETE WITH GUIDE PLATE AND DUCTILE ADJUSTABLE TOP AND LID OR APPROVED EQUAL. CAPS TO BE PAINTED BLUE.
Q. ALL WATERMAIN FASTNERS (STAINLESS BOLTS) TO BE COMPLETE WITH ZINC CAPS.
R. BLOWOFFS IN ACCORDANCE WITH OPSD 1104.030, MIN 50mm DIA.
S. ALL SPECIFIED AGGREGATES TO OPSD 1010.
T. RIPRAP TO OPSS 1004.05.05, ON FILTER FABRIC.
U. FILTER FABRIC – TERRAFIX 270R OR APPROVED EQUAL.
V. INSULATION – STYROFOAM HIGHLOAD 40 EXTRUDED POLYSTYRENE FOAM INSULATION, 50mm THICK SHEETS.

WTM/FITTING	ANODE SIZE (kg)	SPACING
100 mm	2.3	PER LENGTH OVER 3.0 m OR FITTING OF SIMILAR SIZE
150 mm	2.3	PER LENGTH OVER 3.0 m OR FITTING OF SIMILAR SIZE
200 mm	5.5	PER LENGTH OVER 3.0 m OR FITTING OF SIMILAR SIZE
250 mm	5.5	PER LENGTH OVER 3.0 m OR FITTING OF SIMILAR SIZE
300 mm	11	PER LENGTH OVER 3.0 m OR FITTING OF SIMILAR SIZE
COPPER SERVICE	2.3	AT EACH CURBSTOP
HYDRANT	5.5	AT HYDRANT BASE
VALVE	5.5	AT EACH VALVE
SERVICE SADDLE	2.3	AT EACH SERVICE SADDLE (CONNECT WIRE TO BOLT ON SADDLE TIGHT BETWEEN 2 NUTS)
TEES, ELBOWS ETC.	2.3	ON EACH FITTING FOR 100 mm – 150 mm PIPE
TEES, ELBOWS ETC.	5.5	ON EACH FITTING FOR 200 mm – 300 mm PIPE

ANODE SIZING CHART FOR ZINC ANODES

DISCLAIMER AND COPYRIGHT

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, O

LEGEND

UTILITY TRENCH	
GAS MAIN	
BELL MAINTENANCE HOLE	BELL MH
BELL MARKER	BELL
HYDRO POLE	HP
HYDRO GUY WIRE	
GAS MAIN MARKER	GAS
HYDRO TRANSFORMER	
HYDRO SWITCHING VAULT	SWITCH VAULT
HYDRO METER	M
LIGHT STANDARD	LS
LIGHT STANDARD	LS
STREET LIGHT PEDESTAL	
ROGERS PEDESTAL AND VAULT	
ROGERS GRADE LEVEL BOX	ROGERS GLB
BELL PEDESTAL	
BELL GRADE LEVEL BOX	BELL GLB
UTILITY TRENCH	
UTILITY DUCT CROSSING	
STREET LIGHT DUCT CROSSING	
DUCT CROSSING REFERENCE NUMBER	1
GAS MAIN	
MAIL BOX AND PAD	M
SEMI-DETACHED UNIT	

NOTES

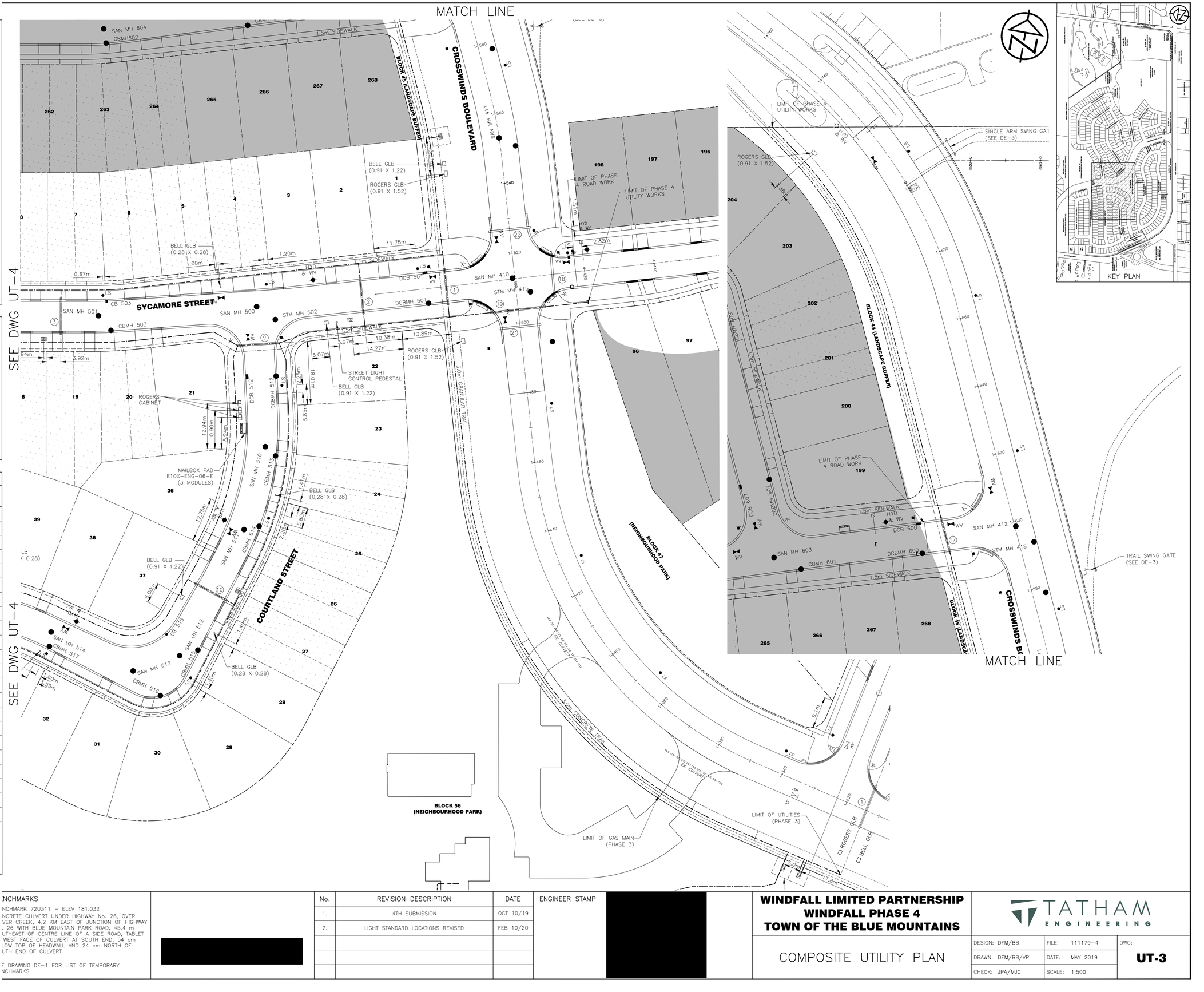
1. THIS PLAN TO BE USED FOR REFERENCE PURPOSES ONLY. SEE PLANS BY UTILITY PROVIDERS FOR CONSTRUCTION DETAILS.
2. REFER TO TYPICAL ROAD CROSS SECTION ON DWG. DE-3 FOR LOCATION OF UTILITIES.
3. SEE PLAN BY UNION GAS (PROJ. No. XX-XX-XXX) FOR DETAILS OF GAS SERVICING. (DATED XX/XX/XX)
4. SEE PLAN BY HYDRO ONE FOR DETAILS OF HYDRO SERVICING (DWG No. 00338-19-048 REV. 1 DATED (19/08/23)
5. SEE PLANS BY BELL CANADA (XXX-XXX) NETWORK # XXXX FOR DETAILS OF BELL SERVICING FOR PHASE 4.
6. SEE PLAN BY ROGERS COMMUNICATIONS PARTNERSHIP (PROJECT No. 5191490 REV. 1) FOR DETAILS PHASE 4 OF CABLE T.V. SERVICING. (DATED SEPT 27, 2019)
7. SEE PLANS BY RUNGE AND ASSOCIATES FOR DETAILS OF THE STREET LIGHT SERVICING FOR PHASE 4. (DATED 16/09/2019)

DUCT CROSSING CHART

DUCT CROSSING No.	NUMBER AND TYPE OF DUCT	LENGTH OF DUCT (m)
1	14HYD, 0SL, 0XSL, 2B, 3R	10.5
2	11HYD, 2SL, 1XSL, 0B, 0R	10.5
3	7HYD, 0SL, 0XSL, 0B, 1R	10.5
4	6HYD, 0SL, 0XSL, 0B, 0R	10.5
5	7HYD, 0SL, 0XSL, 0B, 0R	10.5
6	7HYD, 0SL, 0XSL, 0B, 0R	10.5
7	2HYD, 0SL, 0XSL, 0B, 1R	10.5
8	9HYD, 0SL, 0XSL, 2B, 1R	13.4
9	8HYD, 2SL, 1XSL, 2B, 3R	11.9
10	2HYD, 0SL, 0XSL, 0B, 0R	10.5
11	8HYD, 0SL, 0XSL, 0B, 0R	10.5
12	7HYD, 0SL, 0XSL, 0B, 1R	10.5
13	6HYD, 0SL, 0XSL, 0B, 0R	10.5
14	3HYD, 0SL, 0XSL, 0B, 0R	15.1
15	9HYD, 0SL, 0XSL, 0B, 0R	10.5
16	8HYD, 0SL, 0XSL, 2B, 0R	10.7
17	4HYD, 0SL, 0XSL, 2B, 2R	10.6
18	3HYD, 2SL, 1XSL, 2B, 0R	12.9
19	9HYD, 1SL, 1XSL, 2B, 2R	16.0
20	3HYD, 2SL, 1XSL, 0B, 0R	10.9
21	1GAS	12.0
22	1GAS	12.0

CROSSINGS

1HYD = 1 PRIMARY DUCT
1SL = 1 STREET LIGHT DUCT
1XSL = 1 SPARE STREET LIGHT DUCT
1B = 1 BELL DUCT
1R = 1 ROGERS DUCT
1GAS = 1 UNION GAS (100 mm PVC GREY, 1.0 m COVER)



BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SAVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET ON WEST FACE OF CULVERT AT SOUTH END, 54 cm ABOVE LOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

No.	REVISION DESCRIPTION	DATE
1.	4TH SUBMISSION	OCT 10/19
2.	LIGHT STANDARD LOCATIONS REVISED	FEB 10/20

ENGINEER STAMP

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

COMPOSITE UTILITY PLAN

DESIGN: DFM/BB	FILE: 111179-4	DWG: UT-3
DRAWN: DFM/BB/VP	DATE: MAY 2019	
CHECK: JPA/MJC	SCALE: 1:500	

LEGEND

- UTILITY TRENCH
- GAS MAIN
- BELL MAINTENANCE HOLE — BELL MH
- BELL MARKER — BELL
- HYDRO POLE — HP
- HYDRO GUY WIRE
- GAS MAIN MARKER — GAS
- HYDRO TRANSFORMER
- HYDRO SWITCHING VAULT — SWITCH VAULT
- HYDRO METER — M
- LIGHT STANDARD — LS
- LIGHT STANDARD — LS
- STREET LIGHT PEDESTAL
- ROGERS PEDESTAL AND VAULT
- ROGERS GRADE LEVEL BOX — ROGERS GLB
- BELL PEDESTAL
- BELL GRADE LEVEL BOX — BELL GLB
- UTILITY TRENCH
- UTILITY DUCT CROSSING
- STREET LIGHT DUCT CROSSING
- DUCT CROSSING REFERENCE NUMBER — (1)
- GAS MAIN
- MAIL BOX AND PAD — M
- SEMI-DETACHED UNIT

NOTES

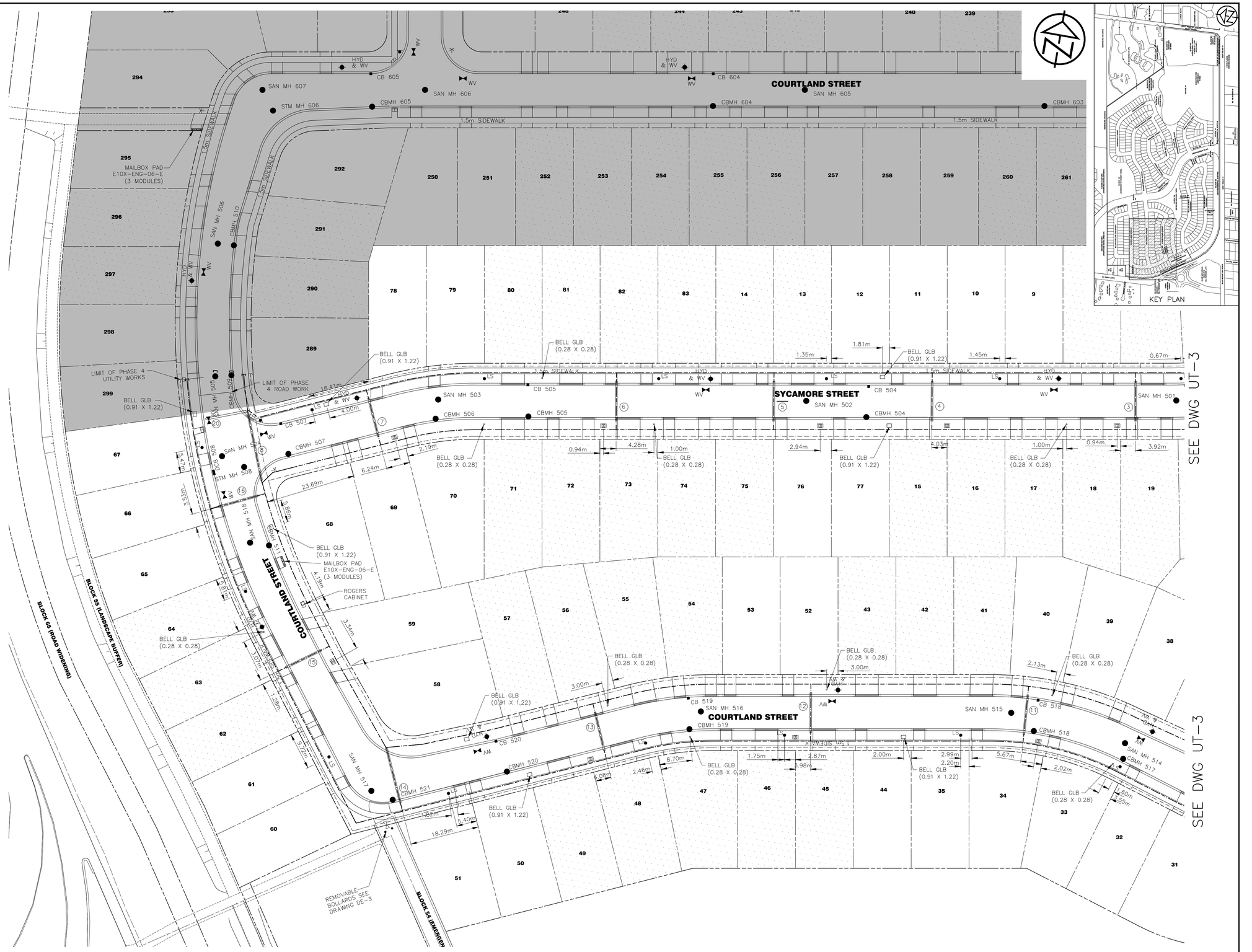
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DUCT CROSSING CHART

DUCT CROSSING No.	NUMBER AND TYPE OF DUCT	LENGTH OF DUCT (m)
1	14HYD, 0SL, 0XSL, 2B, 3R	10.5
2	11HYD, 2SL, 1XSL, 0B, 0R	10.5
3	7HYD, 0SL, 0XSL, 0B, 1R	10.5
4	6HYD, 0SL, 0XSL, 0B, 0R	10.5
5	7HYD, 0SL, 0XSL, 0B, 0R	10.5
6	7HYD, 0SL, 0XSL, 0B, 0R	10.5
7	2HYD, 0SL, 0XSL, 0B, 1R	10.5
8	9HYD, 0SL, 0XSL, 2B, 1R	13.4
9	8HYD, 2SL, 1XSL, 2B, 3R	11.9
10	2HYD, 0SL, 0XSL, 0B, 0R	10.5
11	8HYD, 0SL, 0XSL, 0B, 0R	10.5
12	7HYD, 0SL, 0XSL, 0B, 1R	10.5
13	6HYD, 0SL, 0XSL, 0B, 0R	10.5
14	3HYD, 0SL, 0XSL, 0B, 0R	15.1
15	9HYD, 0SL, 0XSL, 0B, 0R	10.5
16	8HYD, 0SL, 0XSL, 2B, 0R	10.7
17	4HYD, 0SL, 0XSL, 2B, 2R	10.6
18	3HYD, 2SL, 1XSL, 2B, 0R	12.9
19	9HYD, 1SL, 1XSL, 2B, 2R	16.0
20	3HYD, 2SL, 1XSL, 0B, 0R	10.9
21	1GAS	12.0
22	1GAS	12.0

CROSSINGS

1HYD = 1 PRIMARY DUCT
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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET ON WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE-1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted]

No.	REVISION DESCRIPTION	DATE
1.	4TH SUBMISSION	OCT 10/19
2.	LIGHT STANDARD LOCATIONS REVISED	FEB 10/20

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

TATHAM ENGINEERING

COMPOSITE UTILITY PLAN

DESIGN: DFM/BB	FILE: 111179-4	DWG: UT-4
DRAWN: DFM/BB/VP	DATE: MAY 2019	
CHECK: JPA/MJC	SCALE: 1:500	

PHASE 3 - SANITARY SEWER DESIGN SHEET - FINAL DESIGN

C.C.Tatham & Associates Ltd.
Consulting Engineers
Campbell River | Blairadge | Chilliwack | Barrie

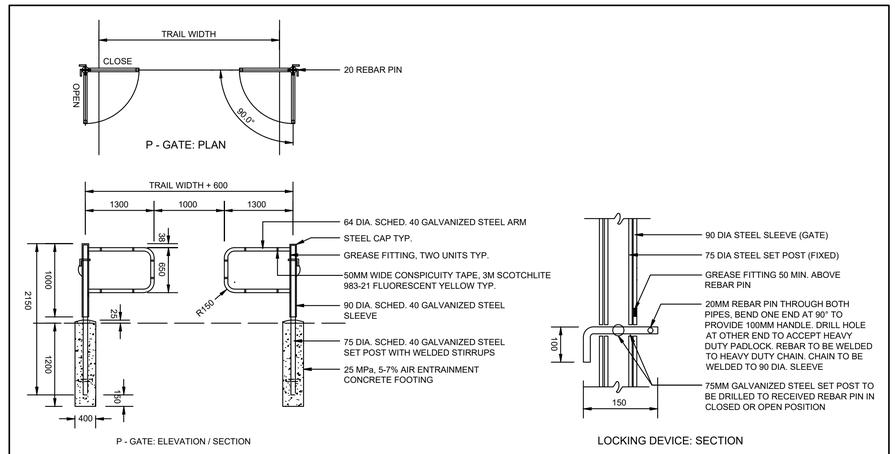
FLOW CRITERIA
Average Daily Flow: 400 l/cap/d
Infiltration Rate: 0.23 l/s/ha
Population: 2.3 cap/unit
Peaking Factor: Harmon

Project Name: Windfall - Phase 4
Project Number: 111179-13
Municipality: Town of The Blue Mountains
Designed By: DPM/BB
Date: November 2, 2018
Checked By: BB/JVM
Revision Date: November 28, 2018
Revision Number: 2
Checked By: JPA
Date: June 14, 2019

Approved:

LICENSED PROFESSIONAL ENGINEER — M. J. PHILLIPS — 29/06/2019 — PROVINCE OF ONTARIO

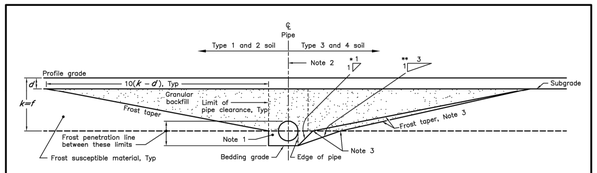
LOCATION OF SECTION	AREA LABEL	UPSTREAM MANHOLE/ HOLE	DOWNSTREAM MANHOLE/ HOLE	POPULATION	ACCUMULATED POPULATION	PEAKING FACTOR	AREA	ACCUMULATED AREA	AVERAGE FLOW: RESIDENTIAL	AVERAGE FLOW: INFILTRATION	AVERAGE FLOW: TOTAL	PEAK FLOW: RESIDENTIAL	PEAK FLOW: INFILTRATION	PEAK FLOW: TOTAL	LENGTH OF PIPE	PIPE DIAMETER	PROPOSED SEWER: GRADE	PROPOSED SEWER: FULL FLOW CAPACITY	PROPOSED SEWER: FULL FLOW VELOCITY	PEAK FLOW VELOCITY (25%D INFILTRATION)
		MH No.	MH No.	cap	cap		ha	ha	l/s	l/s	l/s	l/s	l/s	l/s	m	mm	%	l/s	m/s	m/s
Black Willow Crescent		1004	SAN MH 655	6	6	4.5	0.33	0.33	0.04	0.08	0.11	0.16	0.08	0.24	79.3	200	1.00%	41.48	1.32	0.34
Black Willow Crescent		1005	SAN MH 654	6	12	4.5	0.33	0.66	0.08	0.15	0.23	0.32	0.15	0.47	79.3	200	1.00%	41.48	1.32	0.37
Black Willow Crescent		1006	SAN MH 653	SAN MH 654	63	63	4.50	0.66	0.25	0.38	0.63	1.13	0.38	1.51	109.3	200	1.00%	41.48	1.32	0.48
Black Willow Crescent		1007	SAN MH 652	SAN MH 653	63	126	4.50	0.66	0.25	0.38	0.63	1.13	0.38	1.51	80.2	200	1.00%	41.48	1.32	0.48
Black Willow Crescent		1008	SAN MH 651	SAN MH 652	63	189	4.50	0.66	0.25	0.38	0.63	1.13	0.38	1.51	80.2	200	1.00%	41.48	1.32	0.48
Crawford Street		1009	SAN MH 656	SAN MH 655	14	14	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	49.7	200	2.00%	58.66	1.87	0.38
Crawford Street		1010	SAN MH 657	SAN MH 656	14	28	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1011	SAN MH 658	SAN MH 657	14	42	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1012	SAN MH 659	SAN MH 658	14	56	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1013	SAN MH 660	SAN MH 659	14	70	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1014	SAN MH 661	SAN MH 660	14	84	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1015	SAN MH 662	SAN MH 661	14	98	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1016	SAN MH 663	SAN MH 662	14	112	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1017	SAN MH 664	SAN MH 663	14	126	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1018	SAN MH 665	SAN MH 664	14	140	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1019	SAN MH 666	SAN MH 665	14	154	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1020	SAN MH 667	SAN MH 666	14	168	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1021	SAN MH 668	SAN MH 667	14	182	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1022	SAN MH 669	SAN MH 668	14	196	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1023	SAN MH 670	SAN MH 669	14	210	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1024	SAN MH 671	SAN MH 670	14	224	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1025	SAN MH 672	SAN MH 671	14	238	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1026	SAN MH 673	SAN MH 672	14	252	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1027	SAN MH 674	SAN MH 673	14	266	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1028	SAN MH 675	SAN MH 674	14	280	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1029	SAN MH 676	SAN MH 675	14	294	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1030	SAN MH 677	SAN MH 676	14	308	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1031	SAN MH 678	SAN MH 677	14	322	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1032	SAN MH 679	SAN MH 678	14	336	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1033	SAN MH 680	SAN MH 679	14	350	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1034	SAN MH 681	SAN MH 680	14	364	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1035	SAN MH 682	SAN MH 681	14	378	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1036	SAN MH 683	SAN MH 682	14	392	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1037	SAN MH 684	SAN MH 683	14	406	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1038	SAN MH 685	SAN MH 684	14	420	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1039	SAN MH 686	SAN MH 685	14	434	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1040	SAN MH 687	SAN MH 686	14	448	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1041	SAN MH 688	SAN MH 687	14	462	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1042	SAN MH 689	SAN MH 688	14	476	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1043	SAN MH 690	SAN MH 689	14	490	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1044	SAN MH 691	SAN MH 690	14	504	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1045	SAN MH 692	SAN MH 691	14	518	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1046	SAN MH 693	SAN MH 692	14	532	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1047	SAN MH 694	SAN MH 693	14	546	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1048	SAN MH 695	SAN MH 694	14	560	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1049	SAN MH 696	SAN MH 695	14	574	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1050	SAN MH 697	SAN MH 696	14	588	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1051	SAN MH 698	SAN MH 697	14	602	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1052	SAN MH 699	SAN MH 698	14	616	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1053	SAN MH 700	SAN MH 699	14	630	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1054	SAN MH 701	SAN MH 700	14	644	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1055	SAN MH 702	SAN MH 701	14	658	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1056	SAN MH 703	SAN MH 702	14	672	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1057	SAN MH 704	SAN MH 703	14	686	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1058	SAN MH 705	SAN MH 704	14	700	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1059	SAN MH 706	SAN MH 705	14	714	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1060	SAN MH 707	SAN MH 706	14	728	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1061	SAN MH 708	SAN MH 707	14	742	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1062	SAN MH 709	SAN MH 708	14	756	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1063	SAN MH 710	SAN MH 709	14	770	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1064	SAN MH 711	SAN MH 710	14	784	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1065	SAN MH 712	SAN MH 711	14	798	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1066	SAN MH 713	SAN MH 712	14	812	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1067	SAN MH 714	SAN MH 713	14	826	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1068	SAN MH 715	SAN MH 714	14	840	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1069	SAN MH 716	SAN MH 715	14	854	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1070	SAN MH 717	SAN MH 716	14	868	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1071	SAN MH 718	SAN MH 717	14	882	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1072	SAN MH 719	SAN MH 718	14	896	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1073	SAN MH 720	SAN MH 719	14	910	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1074	SAN MH 721	SAN MH 720	14	924	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1075	SAN MH 722	SAN MH 721	14	938	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1076	SAN MH 723	SAN MH 722	14	952	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1077	SAN MH 724	SAN MH 723	14	966	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1078	SAN MH 725	SAN MH 724	14	980	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1079	SAN MH 726	SAN MH 725	14	994	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1080	SAN MH 727	SAN MH 726	14	1008	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1081	SAN MH 728	SAN MH 727	14	1022	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1082	SAN MH 729	SAN MH 728	14	1036	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1083	SAN MH 730	SAN MH 729	14	1050	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1084	SAN MH 731	SAN MH 730	14	1064	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1085	SAN MH 732	SAN MH 731	14	1078	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1086	SAN MH 733	SAN MH 732	14	1092	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1087	SAN MH 734	SAN MH 733	14	1106	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1088	SAN MH 735	SAN MH 734	14	1120	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1089	SAN MH 736	SAN MH 735	14	1134	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1090	SAN MH 737	SAN MH 736	14	1148	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1091	SAN MH 738	SAN MH 737	14	1162	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1092	SAN MH 739	SAN MH 738	14	1176	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1093	SAN MH 740	SAN MH 739	14	1190	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1094	SAN MH 741	SAN MH 740	14	1204	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1095	SAN MH 742	SAN MH 741	14	1218	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1096	SAN MH 743	SAN MH 742	14	1232	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1097	SAN MH 744	SAN MH 743	14	1246	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1098	SAN MH 745	SAN MH 744	14	1260	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1099	SAN MH 746	SAN MH 745	14	1274	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1100	SAN MH 747	SAN MH 746	14	1288	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1101	SAN MH 748	SAN MH 747	14	1302	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1102	SAN MH 749	SAN MH 748	14	1316	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1103	SAN MH 750	SAN MH 749	14	1330	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1104	SAN MH 751	SAN MH 750	14	1344	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1105	SAN MH 752	SAN MH 751	14	1358	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1106	SAN MH 753	SAN MH 752	14	1372	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1107	SAN MH 754	SAN MH 753	14	1386	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1108	SAN MH 755	SAN MH 754	14	1400	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1109	SAN MH 756	SAN MH 755	14	1414	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1110	SAN MH 757	SAN MH 756	14	1428	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1111	SAN MH 758	SAN MH 757	14	1442	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1112	SAN MH 759	SAN MH 758	14	1456	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1113	SAN MH 760	SAN MH 759	14	1470	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1114	SAN MH 761	SAN MH 760	14	1484	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1115	SAN MH 762	SAN MH 761	14	1498	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1116	SAN MH 763	SAN MH 762	14	1512	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1117	SAN MH 764	SAN MH 763	14	1526	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1118	SAN MH 765	SAN MH 764	14	1540	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1119	SAN MH 766	SAN MH 765	14	1554	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1120	SAN MH 767	SAN MH 766	14	1568	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1121	SAN MH 768	SAN MH 767	14	1582	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1122	SAN MH 769	SAN MH 768	14	1596	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1123	SAN MH 770	SAN MH 769	14	1610	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1124	SAN MH 771	SAN MH 770	14	1624	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1125	SAN MH 772	SAN MH 771	14	1638	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1126	SAN MH 773	SAN MH 772	14	1652	4.50	0.46	0.46	0.10	0.11	0.20	0.11	0.31	79.3	200	2.00%	58.66	1.87	0.38
Crawford Street		1127



NOTES:

2. ALL PIPE SHALL BE SCHEDULE 40 STEEL.
3. ALL WELDS TO BE 5 MM CONTINUOUS SEAM AND GROUND SMOOTH.
4. CONTRACTOR TO SUPPLY HEAVY DUTY PADLOCK AS REQUIRED.
5. CONTRACTOR TO SUBMIT SHOP DRAWINGS.
6. LOCATION OF GATES TO BE FIELD STAKED BY CONTRACTOR FOR REVIEW BY TOWN. LOCATION TO BE APPROVED PRIOR TO INSTALLATION.

TRAIL SWING GATES
NTS

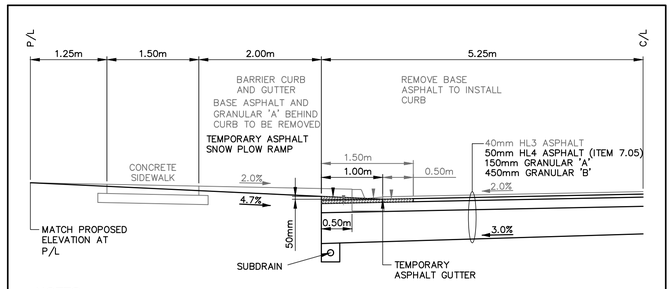


FROST TREATMENT
RIGID AND FLEXIBLE PIPE

NOTES:
1 Pipe embedment or bedding, cover, and backfill shall be according to:
a) Flexible OPSD 802.010, 802.013, 802.014, 802.020, 802.023, and 802.024.
b) Rigid – OPSD 802.030, 802.031, 802.032, 802.033, 802.034, 802.050, 802.051, 802.052, 802.053, and 802.054.
2 Condition of frost treatment symmetrical about centreline of pipe.
3 Frost tapers shall start at the intersection of the 1H:1V or 3H:1V slope and the frost penetration line.
A Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.

LEGEND:
d – depth of roadbed granular
k – depth of frost treatment below profile grade
f – depth of frost penetration below profile grade
* – Type 3 soil
** – Type 4 soil

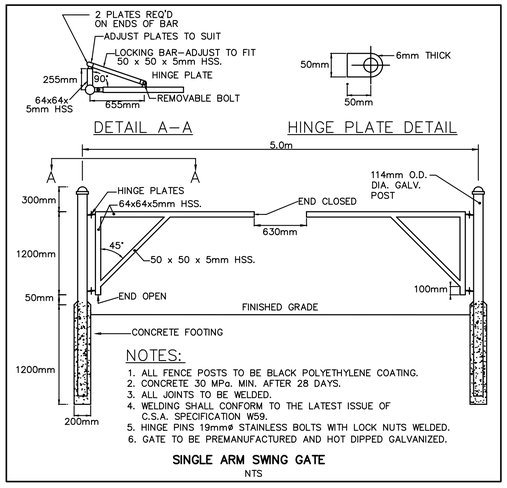
ONTARIO PROVINCIAL STANDARD DRAWING		
FROST TREATMENT – PIPE CULVERTS FROST PENETRATION LINE BETWEEN TOP OF PIPE AND BEDDING GRADE	Nov 2015	Rev 4
	OPSD 803.031	



NOTES
1. CATCH BASINS TO BE SET TO BASE COURSE ASPHALT AND RAISED PRIOR TO PLACEMENT OF SURFACE COURSE ASPHALT
2. MAIN LINE WATER VALVE BOXES TO BE SET TO TEMPORARY BOULEVARD ELEVATION AND RAISED TO FINAL GRADE ONCE CURB AND SIDEWALKS HAVE BEEN INSTALLED
3. BOULEVARDS TO BE TEMPORARILY CONSTRUCTED USING SUBGRADE MATERIAL UNTIL SUCH TIME AS CURB AND SIDEWALK IS CONSTRUCTED AT WHICH POINT THE SUBGRADE MATERIAL IS TO BE REMOVED TO ALLOW FOR THE PLACEMENT OF 300 mm DEPTH TOPSOIL AND NURSERY SOD.

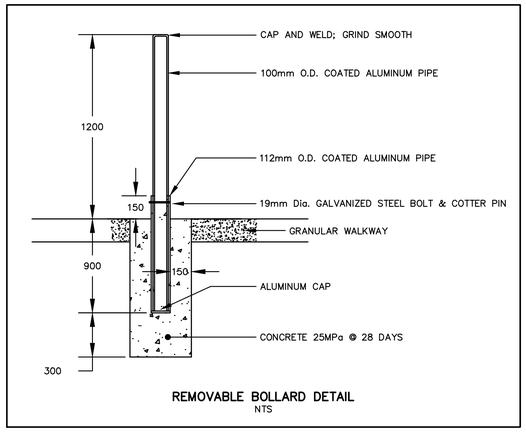
STAGE 1
STAGE 2

DETAIL OF TWO STAGE URBAN ROAD CROSS–SECTION
NTS

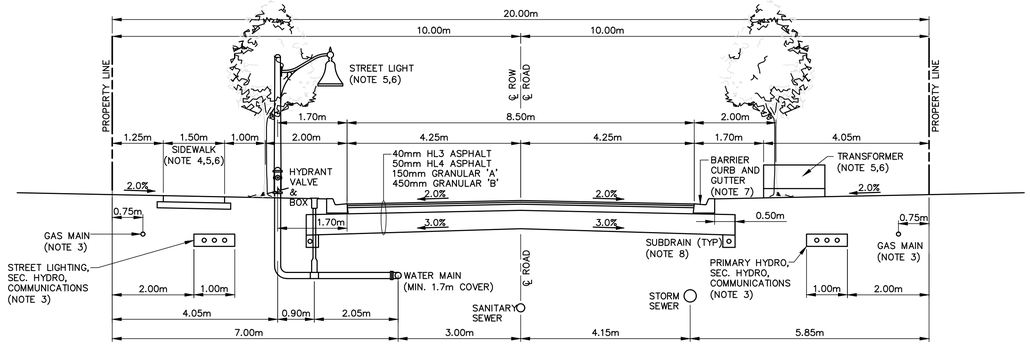


NOTES:
1. ALL FENCE POSTS TO BE BLACK POLYETHYLENE COATING.
2. CONCRETE 30 MPa. MIN. AFTER 28 DAYS.
3. ALL JOINTS TO BE WELDED.
4. WELDING SHALL CONFORM TO THE LATEST ISSUE OF C.S.A. SPECIFICATION W59.
5. HINGE PINS 19mmø STAINLESS BOLTS WITH LOCK NUTS WELDED.
6. GATE TO BE PREMANUFACTURED AND HOT DIPPED GALVANIZED.

SINGLE ARM SWING GATE
NTS

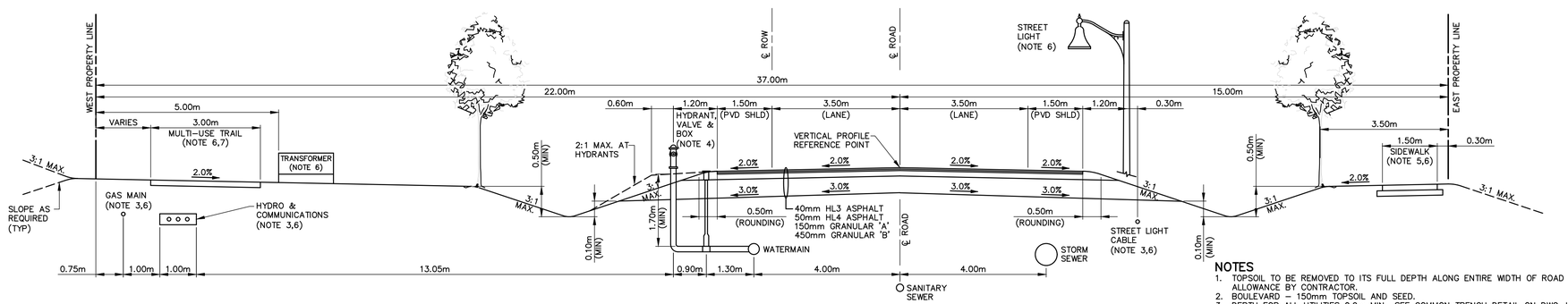


REMOVABLE BOLLARD DETAIL
NTS



NOTES
1. TOPSOIL TO BE REMOVED TO ITS FULL DEPTH ALONG ENTIRE WIDTH OF ROAD ALLOWANCE BY CONTRACTOR.
2. BOULEVARD – 300mm TOPSOIL AND SOD.
3. DEPTH FOR ALL UTILITIES 0.9m MIN., SEE COMMON TRENCH DETAIL ON DWG. UT–1.
4. SIDEWALKS TO OPSD 310.010, COMPLETE WITH 150mm GRANULAR 'A' BASE.
5. SIDEWALK, STREET LIGHTS AND TRANSFORMERS ONE SIDE ONLY.
6. SIDEWALK AND STREET LIGHTS TO BE ON SAME SIDE OF ROAD AND TRANSFORMER TO BE ON OPPOSITE SIDE.
7. CONCRETE BARRIER CURB AND GUTTER TO OPSD 600.040 (TYP)
8. SUBDRAINS TO OUTLET TO CATCH BASINS AS PER OPSD 216.021.

20m ROW – URBAN CROSS–SECTION
NTS



37.0m ROW – RURAL CROSS–SECTION
(CROSSWINDS BOULEVARD)
NTS

NOTES
1. TOPSOIL TO BE REMOVED TO ITS FULL DEPTH ALONG ENTIRE WIDTH OF ROAD ALLOWANCE BY CONTRACTOR.
2. BOULEVARD – 150mm TOPSOIL AND SEED.
3. DEPTH FOR ALL UTILITIES 0.9m MIN., SEE COMMON TRENCH DETAIL ON DWG. UT–1.
4. HYDRANT VALVE BOXES TO BE IN ASPHALT.
5. SIDEWALKS TO OPSD 310.010, COMPLETE WITH 150mm GRANULAR 'A' BASE.
6. SIDEWALK AND STREET LIGHTS TO BE ON THE SAME SIDE OF THE ROAD AND ARE ONLY ON ONE SIDE. TRANSFORMER, HYDRO CABLES, COMMUNICATION CABLES, GAS MAIN AND MULTI–USE TRAIL TO BE ON OPPOSITE SIDE.
7. MULTI–USE TRAIL AS PER DETAIL ON DWG. DE–1.

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BENCHMARKS

BENCHMARK 72U311 – ELEV 181.032
CONCRETE CULVERT UNDER HIGHWAY No. 26, OVER SILVER CREEK, 4.2 KM EAST OF JUNCTION OF HIGHWAY No. 26 WITH BLUE MOUNTAIN PARK ROAD, 45.4 m SOUTHEAST OF CENTRE LINE OF A SIDE ROAD, TABLET IN WEST FACE OF CULVERT AT SOUTH END, 54 cm BELOW TOP OF HEADWALL AND 24 cm NORTH OF SOUTH END OF CULVERT

SEE DRAWING DE–1 FOR LIST OF TEMPORARY BENCHMARKS.

[redacted] 10/30/2019

No.	REVISION DESCRIPTION	DATE
1.	1ST SUBMISSION	DEC 5/18
2.	2ND SUBMISSION	JUNE 14/19
3.	3RD SUBMISSION	JULY 30/19
4.	4TH SUBMISSION	OCT 10/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

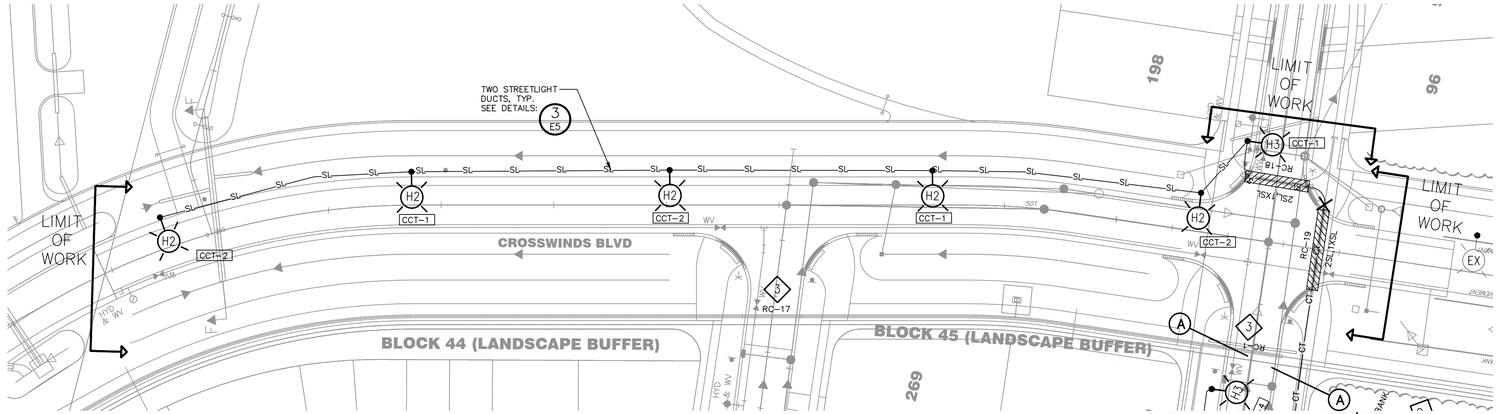
DETAILS, SECTIONS AND NOTES

TATHAM ENGINEERING

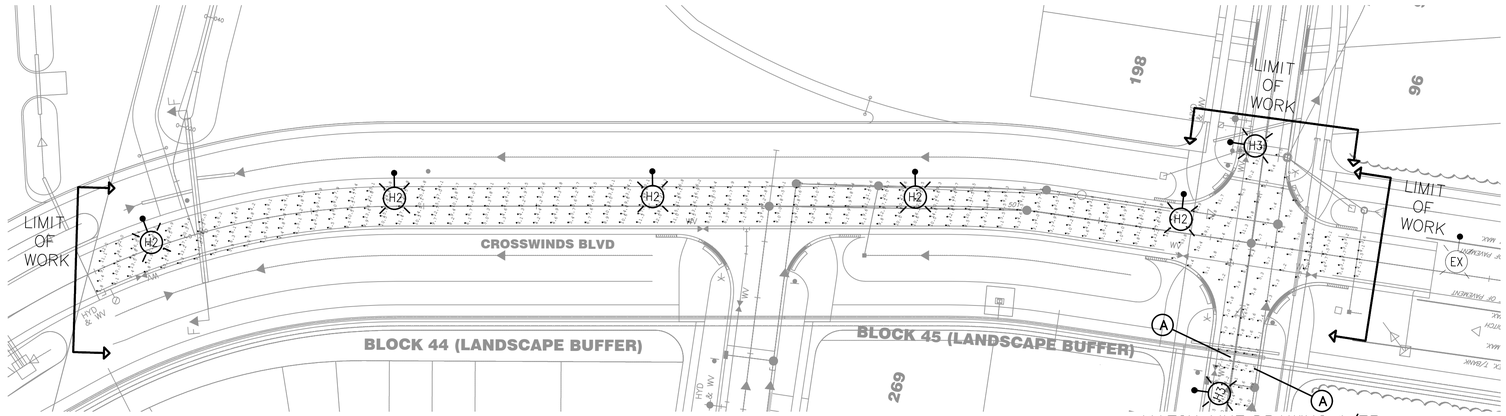
DE-3

NTS

Drawing Name: 111179-4-DE01.dwg, Plotted: Oct 11, 2019



1 E1 **SITE PLAN – LIGHTING LAYOUT – CROSSWINDS BOULEVARD**
– SCALE 1:500

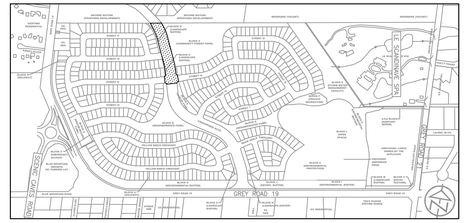


2 E1 **SITE PLAN – PHOTOMETRICS – CROSSWINDS BOULEVARD**
– SCALE 1:500

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
I - Crosswinds & Sycamore	Illuminance	Lux	9.16	32.9	2.8	3.43	11.75
S - Crosswinds Blvd	Illuminance	Lux	10.21	34.5	3.1	3.29	11.13

[redacted] 10/30/2019

3 E1 **PHOTOMETRIC CALCULATION SUMMARY**
– NTS



KEY PLAN – NTS

ELECTRICAL LEGEND

SYMBOLS:

EX	EXISTING STREET LIGHT
H#	LUMINAIRE TYPE H#. REFER TO LUMINAIRE SPECIFICATIONS ON DWG E6.
CCT–#	PROPOSED STREET LIGHTING CIRCUIT CONNECTED TO EXISTING PEDESTAL LP–B
LP–B	STREET LIGHT PEDESTAL WITH TAG
TYP.	TYPICAL
SL	PROPOSED STREET LIGHT CABLE(S) AND CONDUIT
CT	PROPOSED STREET LIGHT CABLE(S) AND CONDUIT (RIGID PVC) IN COMMON TRENCH WITH HYDRO.
X	TRANSITION BETWEEN STREET LIGHT TRENCH AND COMMON TRENCH
	HONI POWER TRANSFORMER
RC–1 1SL,1XSL	CONCRETE ENCASED ROAD CROSSING DUCTBANK AND TAG NUMBER. SL = STREETLIGHT DUCT, XSL = SPARE STREETLIGHT DUCT

DRAWING NOTES

1. CONTRACTOR TO REFER TO HYDRO ONE TABLE 1B FOR MINIMUM HORIZONTAL CLEARANCES BETWEEN PEDESTAL AND PAD–MOUNTED EQUIPMENT ACCESS AND NON–ACCESS SIDES.
2. CONTRACTOR TO REFER TO HYDRO ONE TABLE 1B FOR MINIMUM HORIZONTAL CLEARANCES TO ALL UNDERGROUND PLANT/STRUCTURES.
3. REFER TO HONI DRAWING #00338–19–048 FOR ROAD CROSSING REQUIREMENTS. ALSO REFER TO BELL AND ROGERS DRAWINGS FOR ADDITIONAL COMMUNICATION ROAD CROSSING DUCTS.

STREETLIGHTS TO BE A MINIMUM OF 1.5m FROM EDGE OF DRIVEWAY TO OUTER EDGE OF POLE

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2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.

3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

ELECTRICAL ENGINEERS:
RUNGE ENGINEERING
Runge & Associates Inc.
864 Hurontario Street
P.O. Box 387
Collingwood, ON L9Y 3Z7
b: (705) 446–3590
f: (705) 446–3588
www.rainengineers.ca

JOB No.: 11129T–06

NOT FOR CONSTRUCTION

No.	REVISION DESCRIPTION	DATE
1.	ISSUED FOR PRELIMINARY REVIEW	SEP 16/19
2.	ISSUED FOR TOWN APPROVAL	OCT 10/19
3.	RE–ISSUED FOR TOWN APPROVAL	OCT 17/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

CROSSWINDS BOULEVARD LIGHTING LAYOUT AND PHOTOMETRICS

TATHAM ENGINEERING

DESIGN: SRT/JS	FILE: 111179–4	DWG: E1
DRAWN: SRT/JS	DATE: OCT 2019	
CHECK: GGR	SCALE:	



[redacted] 10/30/2019

1/E2 SITE PLAN – LIGHTING LAYOUT – SYCAMORE & COURTLAND ST
– SCALE 1:500

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RUNGE ENGINEERING
Runge & Associates Inc.
864 Hurontario Street
P.O. Box 357
Collingwood, ON L9Y 3Z7
b: (705) 446-3590
f: (705) 446-3588
www.raiengineers.ca

JOB No.: 11129T-06

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No.	REVISION DESCRIPTION	DATE
1.	ISSUED FOR PRELIMINARY REVIEW	SEP 16/19
2.	ISSUED FOR TOWN APPROVAL	OCT 10/19
3.	RE-ISSUED FOR TOWN APPROVAL	OCT 17/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

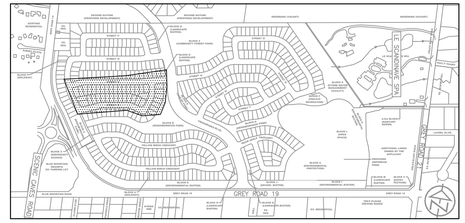
COURTLAND & SYCAMORE LIGHTING LAYOUT

TATHAM ENGINEERING

DESIGN: SRT/JS	FILE: 111179-4	DWG:	
DRAWN: SRT/JS	DATE: OCT 2019		E2
CHECK: GGR	SCALE:		

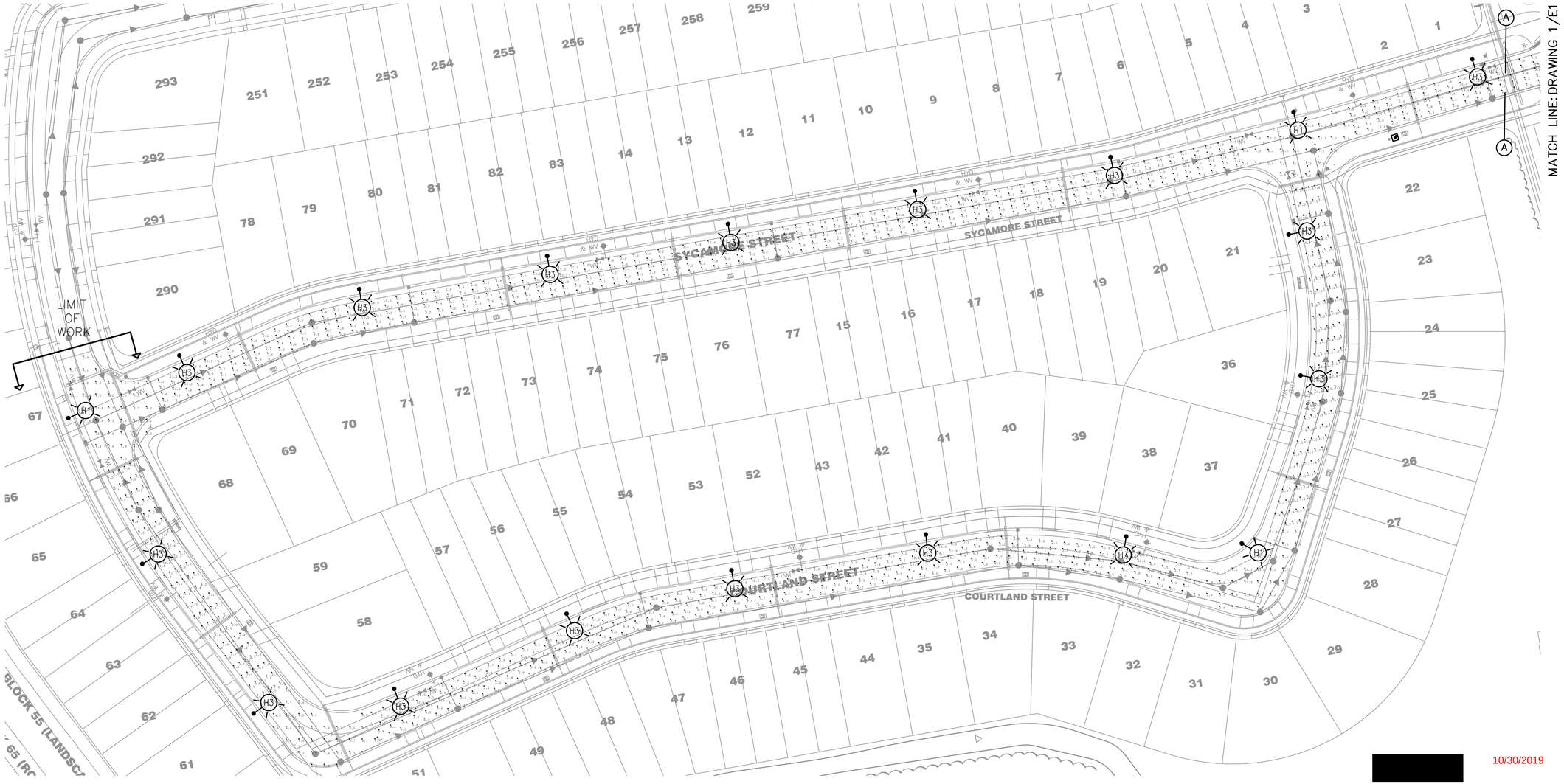
Calculation Summary							
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I - Courtland & Sycamore 1	Illuminance	Lux	8.14	22.8	2.1	3.88	10.86
S - Courtland & Sycamore 2	Illuminance	Lux	7.27	21.4	2.2	3.30	9.73
S - Courtland St Section 1	Illuminance	Lux	6.16	16.3	1.8	3.42	9.06
S - Courtland St Section 2	Illuminance	Lux	6.67	19.7	1.7	3.92	11.59
S - Courtland St Section 3	Illuminance	Lux	5.81	16.6	1.6	3.63	10.38
S - Courtland St Section 4	Illuminance	Lux	5.52	15.8	2.6	2.12	6.08
S - Courtland St Section 5	Illuminance	Lux	5.73	15.4	2.0	2.87	7.70
S - Sycamore St Section 1	Illuminance	Lux	5.52	16.0	2.0	2.76	8.00
S - Sycamore St Section 2	Illuminance	Lux	5.50	16.4	1.5	3.67	10.93

REFER TO DRAWING E1 FOR LEGEND AND NOTES



KEY PLAN – NTS

2 E3 PHOTOMETRIC CALCULATION SUMMARY
– NTS



[redacted] 10/30/2019

1 E3 SITE PLAN – PHOTOMETRICS – SYCAMORE & COURTLAND ST
– SCALE 1:500

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Runge & Associates Inc.
864 Hurontario Street
P.O. Box 387
Collingwood, ON L9Y 3Z7
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1.	ISSUED FOR PRELIMINARY REVIEW	SEP 16/19
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3.	RE-ISSUED FOR TOWN APPROVAL	OCT 17/19

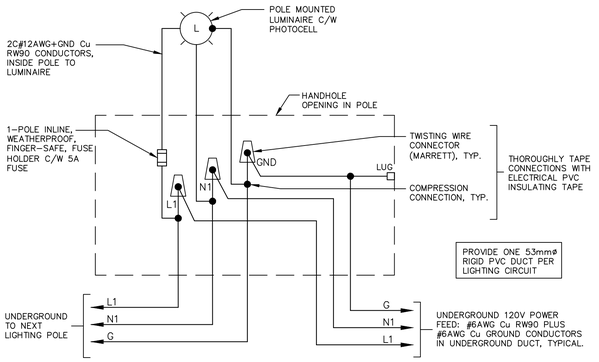
ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

COURTLAND & SYCAMORE
PHOTOMETRIC LAYOUT

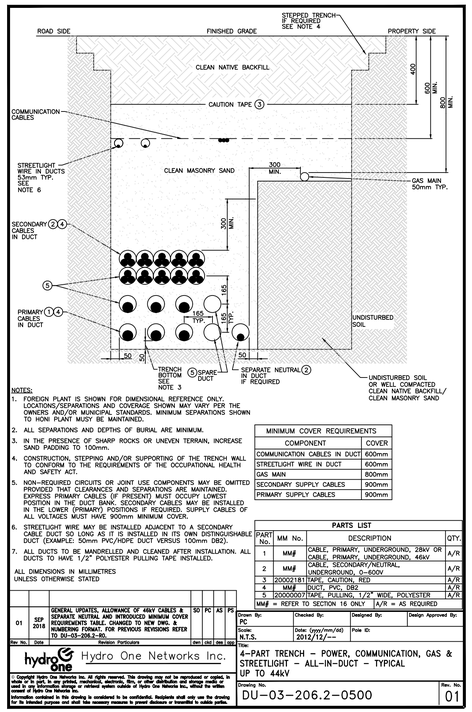
TATHAM ENGINEERING

DESIGN: SRT/JS	FILE: 111179-4	DWG:	
DRAWN: SRT/JS	DATE: OCT 2019		E3
CHECK: GGR	SCALE:		



4 E4 TYP. WIRING DETAIL FOR STREET LIGHT

– NTS



NOTES:

1. FOREIGN PLANT IS SHOWN FOR DIMENSIONAL REFERENCE ONLY. LOCATIONS/SEPARATIONS AND COVERAGE SHOWN MAY VARY PER THE OWNERS AND/OR MUNICIPAL STANDARDS. MINIMUM SEPARATIONS SHOWN TO HONI PLANT MUSY BE MAINTAINED.
2. ALL SEPARATIONS AND DEPTHS OF BURIAL ARE MINIMUM.
3. IN THE PRESENCE OF SHARP ROCKS OR UNEVEN TERRAIN, INCREASE SAND PADDING TO 100mm.
4. CONSTRUCTION, STEPPING AND/OR SUPPORTING OF THE TRENCH WALL TO CONFORM TO THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT.
5. NON-REQUIRED CIRCUITS OR JOINT USE COMPONENTS MAY BE OMITTED PROVIDED THAT CLEARANCES AND SEPARATIONS ARE MAINTAINED. EXPRESS PRIMARY CABLES (IF PRESENT) MUST OCCUPY LOWEST POSITION IN THE DUCT BANK. SECONDARY CABLES MAY BE INSTALLED IN THE LOWER (PRIMARY) POSITIONS IF REQUIRED. SUPPLY CABLES OF ALL VOLTAGES MUST HAVE 900mm MINIMUM COVER.
6. STREETLIGHT WIRE MAY BE INSTALLED ADJACENT TO A SECONDARY CABLE DUCT SO LONG AS IT IS INSTALLED IN ITS OWN DISTINGUISHABLE DUCT (EXAMPLE: 50mm PVC/HDPE DUCT VERSUS 100mm DB2).
7. ALL DUCTS TO BE MANDRELLED AND CLEANED AFTER INSTALLATION. ALL DUCTS TO HAVE 1/2" POLYESTER PULLING TAPE INSTALLED.

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

MINIMUM COVER REQUIREMENTS	
COMPONENT	COVER
COMMUNICATION CABLES IN DUCT	600mm
STREETLIGHT WIRE IN DUCT	600mm
GAS MAIN	800mm
SECONDARY SUPPLY CABLES	900mm
PRIMARY SUPPLY CABLES	900mm

PARTS LIST			
PART No.	MM No.	DESCRIPTION	QTY.
1	MM#	CABLE, PRIMARY, UNDERGROUND, 28kV OR CABLE, PRIMARY, UNDERGROUND, 46kV	A/R
2	MM#	CABLE, SECONDARY/NEUTRAL, UNDERGROUND, 0-600V	A/R
3	2000218T	TAPE, CAUTION, RED	A/R
4	MM#	DUCT, PVC, DB2	A/R
5	2000000T	TAPE, PULLING, 1/2" WIDE, POLYESTER	A/R

MM# = REFER TO SECTION 16 ONLY A/R = AS REQUIRED

Rev. No.	Date	Revision Particulars	dsn	chd	des	apd
01	SEP 2018	GENERAL UPDATES, ALLOWANCE OF 46kV CABLES & SEPARATE NEUTRAL AND INTRODUCED MINIMUM COVER REQUIREMENTS TABLE. CHANGED TO NEW DWG. & NUMBERING FORMAT. FOR PREVIOUS REVISIONS REFER TO DU-03-206.2-00.	SD	PC	AS	PS

Drawn By: PC | Checked By: | Designed By: | Design Approved By:
Scale: N.T.S. | Date: (yyyy/mm/dd) 2012/12/-- | Pole ID:

hydro one Hydro One Networks Inc.

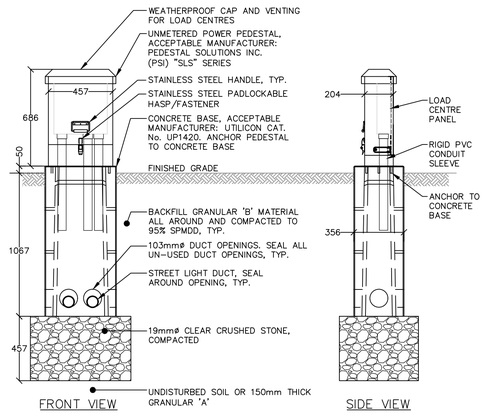
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Title: 4-PART TRENCH – POWER, COMMUNICATION, GAS & STREETLIGHT – ALL-IN-DUCT – TYPICAL UP TO 44kV

Drawing No.: DU-03-206.2-0500 | Rev. No.: 01

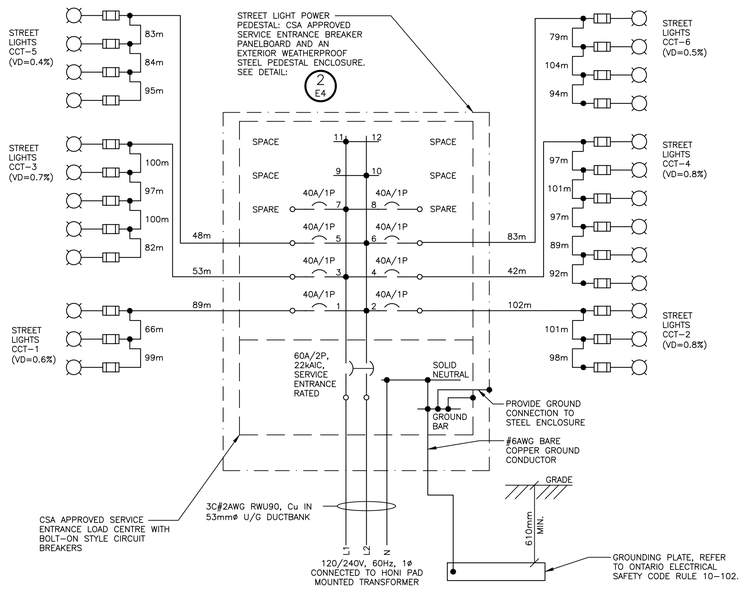
5 E4 HONI TRENCH DETAIL – COMMON TRENCH (CT)

–NTS



2 E4 TYP. UNMETERED STREETLIGHT POWER PEDESTAL DETAIL

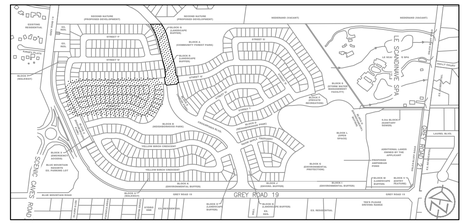
–NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)

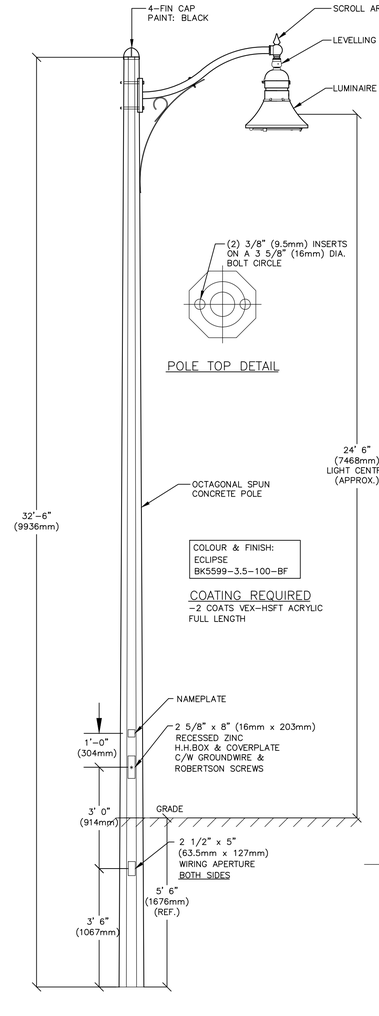


1 E4 POWER PEDESTAL LP-B WIRING DETAIL

–NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm)
–VOLTAGE DROP CALCULATION SHOWN AT EACH CIRCUIT

[redacted] 10/30/2019





LIGHTING SPECIFICATIONS

LUMINAIRE TYPE "H1":

CATALOGUE No.:	K800-P4FL-III-40(SSL)-8060-120-4K-BK
MATERIAL:	GLASS, FLAT LENS
IES CLASSIFICATION:	TYPE III
WATTAGE:	40WATT
LIGHT SOURCE:	LED
LINE VOLTAGE:	120V
LUMINAIRE LUMENS:	4747
PAINT:	BLACK
LUMINAIRE MOUNTING HEIGHT:	24'-6" (7468mm) ABOVE GRADE
OPTIONS:	C/W KPL10 LEVELING DEVICE & PHOTO BUTTON CELL

LUMINAIRE TYPE "H2":

CATALOGUE NO.:	K800-P4FL-III-60(SSL)-8060-120-4K-BK
MATERIAL:	GLASS, FLAT LENS
IES CLASSIFICATION:	TYPE III
WATTAGE:	60WATT
LIGHT SOURCE:	LED
LINE VOLTAGE:	120V
LUMINAIRE LUMENS:	7289
COLOR:	BLACK
LUMINAIRE MOUNTING HEIGHT:	24'-6" (7468MM) ABOVE GRADE
OPTIONS:	C/W KPL10 LEVELING DEVICE & PHOTO BUTTON CELL

LUMINAIRE TYPE "H3":

CATALOGUE NO.:	K800-P4FL-III-25(SSL)-8060-120-4K-BK
MATERIAL:	GLASS, FLAT LENS
IES CLASSIFICATION:	TYPE III
WATTAGE:	25WATT
LIGHT SOURCE:	LED
LINE VOLTAGE:	120V
LUMINAIRE LUMENS:	3845
COLOR:	BLACK
LUMINAIRE MOUNTING HEIGHT:	24'-6" (7468MM) ABOVE GRADE
OPTIONS: & PHOTO BUTTON CELL	C/W KPL10 LEVELING DEVICE

SCROLL ARM (1):

CATALOGUE No.:	KA30-S-1
ARM LENGTH:	6'-0" (1829mm)
MATERIAL:	ALUMINIUM
PAINT:	BLACK

OCTAGONAL POLE:

CATALOGUE No.:	E325-APO-E11-FC
COLOUR:	ECLIPSE
FINISH:	ETCHED
OVERALL POLE HEIGHT:	32'-6" (9906mm)
HEIGHT ABOVE GRADE:	27'-0" (8230mm)

3 E4 LUMINAIRE, POLE AND ARM SPECIFICATIONS – "H1, H2 AND H3"

– NTS

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2. The contractor shall verify all dimensions, levels, and datums on site and report any discrepancies or omissions to this office prior to construction.
3. This drawing is to be read and understood in conjunction with all other plans and documents applicable to this project.

ELECTRICAL ENGINEERS: RUNGE ENGINEERING
Runge & Associates Inc.
864 Hurontario Street
P.O. Box 387
Collingwood, ON L9Y 3Z7
b: (705) 446-3590
f: (705) 446-3588
www.raiengineers.ca

JOB No.: 11129T-06

NOT FOR CONSTRUCTION

No.	REVISION DESCRIPTION	DATE
1.	ISSUED FOR PRELIMINARY REVIEW	SEP 16/19
2.	ISSUED FOR TOWN APPROVAL	OCT 10/19
3.	RE-ISSUED FOR TOWN APPROVAL	OCT 17/19

ENGINEER STAMP [redacted]

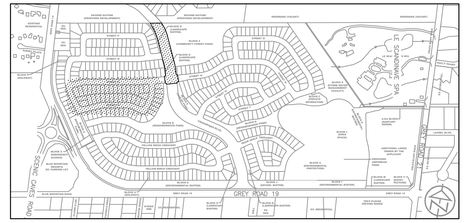
WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

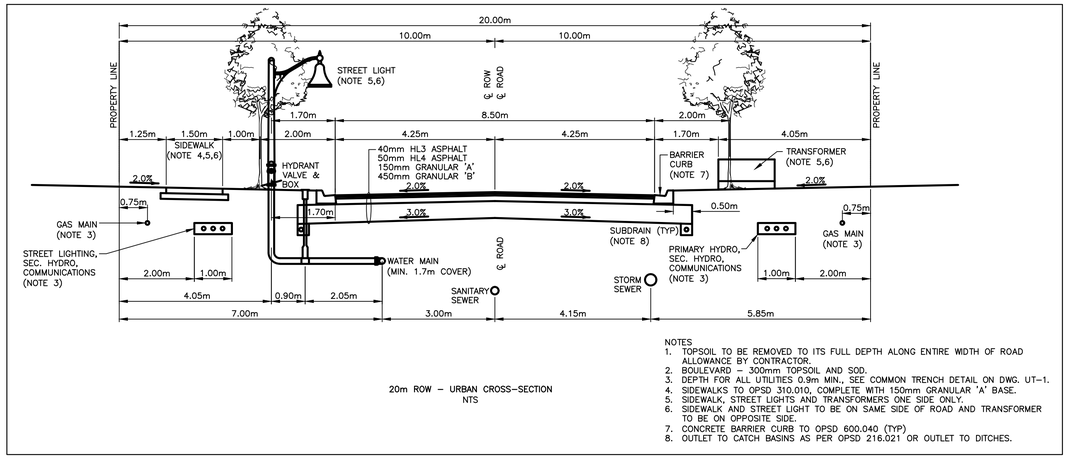
INSTALLATION DETAILS AND LUMINAIRE SPECIFICATIONS

TATHAM ENGINEERING

DESIGN: SRT/JS	FILE: 111179-4	DWG:	
DRAWN: SRT/JS	DATE: OCT 2019		E4
CHECK: GGR	SCALE:		

[redacted] 10/30/2019

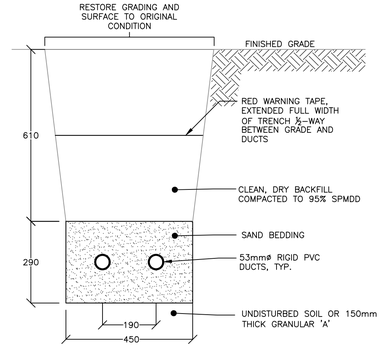




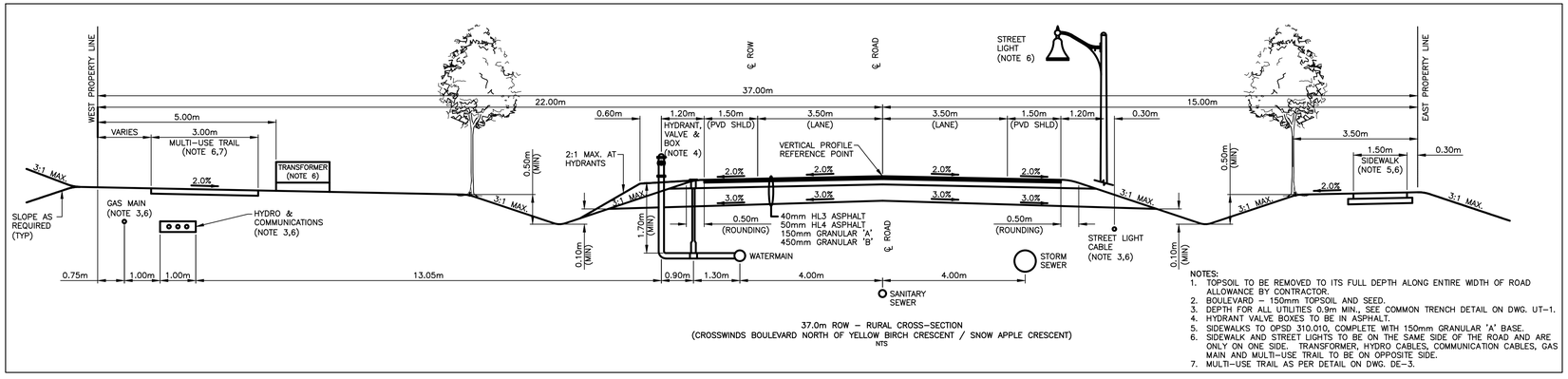
20m ROW – URBAN CROSS–SECTION
NTS

NOTES
1. TOPSOIL TO BE REMOVED TO ITS FULL DEPTH ALONG ENTIRE WIDTH OF ROAD ALLOWANCE BY CONTRACTOR.
2. BOULEVARD – 300mm TOPSOIL AND SOD.
3. DEPTH FOR ALL UTILITIES 0.9m MIN., SEE COMMON TRENCH DETAIL ON DWG. UT–1.
4. SIDEWALKS TO OPSD 310.010, COMPLETE WITH 150mm GRANULAR 'A' BASE.
5. SIDEWALK, STREET LIGHTS AND TRANSFORMERS ONE SIDE ONLY.
6. SIDEWALK AND STREET LIGHT TO BE ON SAME SIDE OF ROAD AND TRANSFORMER TO BE ON OPPOSITE SIDE.
7. CONCRETE BARRIER CURB TO OPSD 600.040 (TYP)
8. OUTLET TO CATCH BASINS AS PER OPSD 216.021 OR OUTLET TO DITCHES.

1 E5 TYP. ROAD CROSS SECTION
– NTS



3 E5 SECONDARY AND LIGHTING DUCTBANK
– NTS, DIMENSIONS SHOWN IN MILLIMETRES (mm). DUCTBANK NOTES:
- PROVIDE FISH ROPE IN EACH SPARE (S) DUCT
- INSTALL SPACERS EVERY 1524mm TO ASSEMBLE DUCTBANK. OFFSET OR STAGGER SPACERS.
- GLUE ALL PVC JOINTS



37.0m ROW – RURAL CROSS–SECTION
(CROSSWINDS BOULEVARD NORTH OF YELLOW BIRCH CRESCENT / SNOW APPLE CRESCENT)
NTS

NOTES:
1. TOPSOIL TO BE REMOVED TO ITS FULL DEPTH ALONG ENTIRE WIDTH OF ROAD ALLOWANCE BY CONTRACTOR.
2. BOULEVARD – 150mm TOPSOIL AND SEED.
3. DEPTH FOR ALL UTILITIES 0.9m MIN., SEE COMMON TRENCH DETAIL ON DWG. UT–1.
4. HYDRANT VALVE BOXES TO BE IN ASPHALT.
5. SIDEWALKS TO OPSD 310.010, COMPLETE WITH 150mm GRANULAR 'A' BASE.
6. SIDEWALK AND STREET LIGHTS TO BE ON THE SAME SIDE OF THE ROAD AND ARE ONLY ON ONE SIDE. TRANSFORMER, HYDRO CABLES, COMMUNICATION CABLES, GAS MAIN AND MULTI–USE TRAIL TO BE ON OPPOSITE SIDE.
7. MULTI–USE TRAIL AS PER DETAIL ON DWG. DE–3.

2 E5 TYP. ROAD CROSS SECTION CROSSWINDS BOULEVARD
– NTS

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ELECTRICAL ENGINEERS:
RUNGE ENGINEERING
Runge & Associates Inc.
864 Hurontario Street
P.O. Box 387
Collingwood, ON L9Y 3Z7
b: (705) 446–3590
f: (705) 446–3588
www.rajengineers.ca

JOB No.: 11129T–06

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3.	RE–ISSUED FOR TOWN APPROVAL	OCT 17/19

ENGINEER STAMP [redacted]

WINDFALL LIMITED PARTNERSHIP
WINDFALL PHASE 4
TOWN OF THE BLUE MOUNTAINS

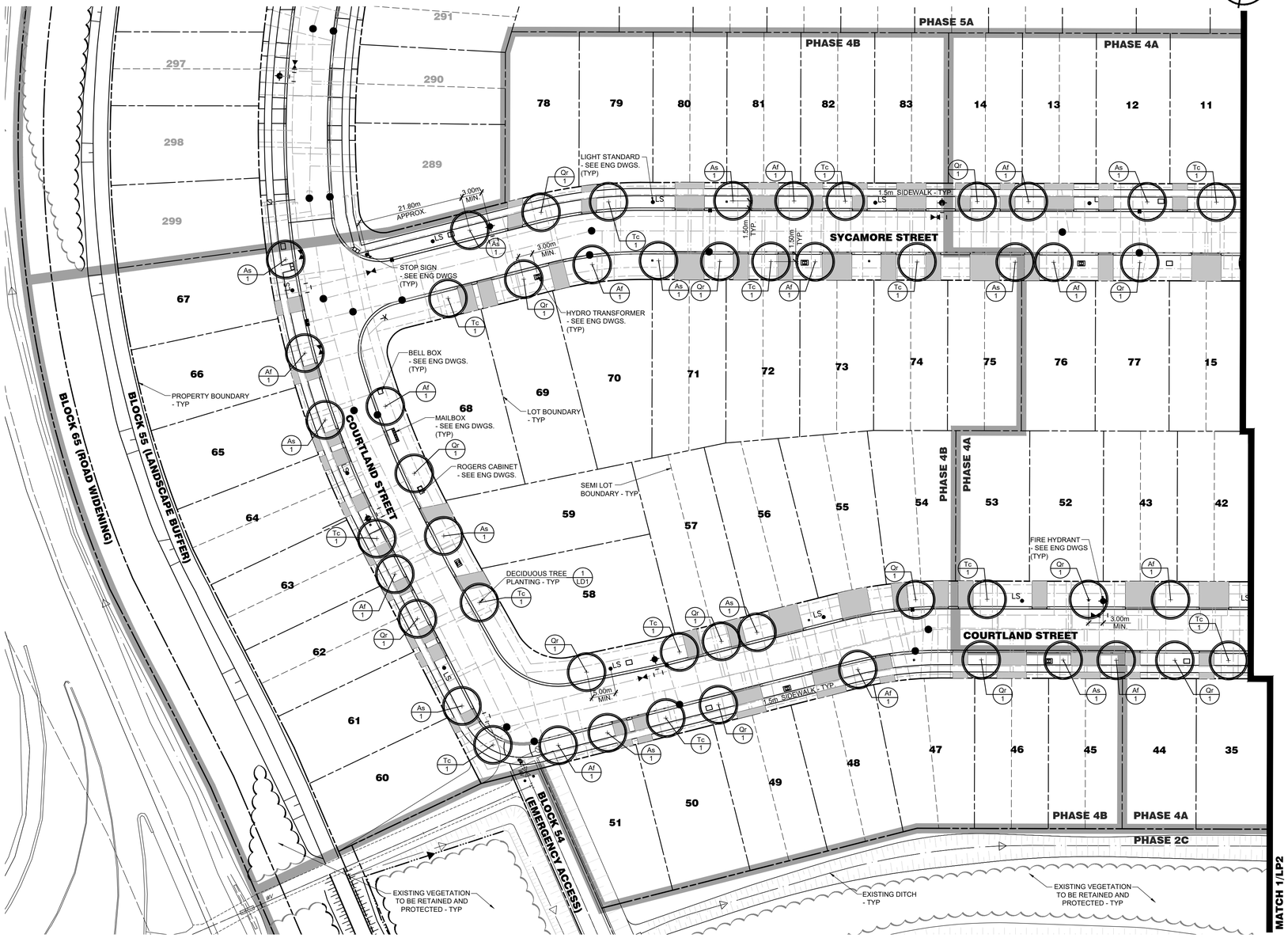
ROAD CROSS SECTION

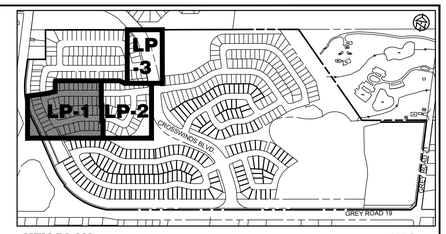
TATHAM ENGINEERING

DESIGN: SRT/JS	FILE: 111179–4	DWG: E5
DRAWN: SRT/JS	DATE: OCT 2019	
CHECK: GGR	SCALE:	

LEGEND

- PROPERTY BOUNDARY
- LOT BOUNDARY
- SEMI LOT BOUNDARY
- PHASE BOUNDARY
- EXISTING VEGETATION
- EXISTING WATER VALVE
- EXISTING MANHOLE
- LS LIGHT STANDARD - SEE ENG. DWGS
- HYDRO TRANSFORMER - SEE ENG. DWGS
- FIRE HYDRANT - SEE ENG. DWGS
- WATER VALVE - SEE ENG. DWGS
- MANHOLE - SEE ENG. DWGS
- CATCH BASIN - SEE ENG. DWGS
- SIGN - SEE ENG. DWGS
- COMMUNITY MAILBOX - SEE ENG. DWGS
- BELL BOX - SEE ENG. DWGS
- ROGERS CABINET - SEE ENG. DWGS
- UNDERGROUND SERVICES - SEE ENG. DWGS
- EXISTING DITCH
- DECIDUOUS TREE
- SPECIES / QUANTITY — SP 1 — PLANT REFERENCE TAG





KEY PLAN NTS

PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACING	QTY
Deciduous Trees						
Af	Acer x freemanii 'Jeffersred'	Autumn Blaze Maple	50mm cal.	W.B.		28
As	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	50mm cal.	W.B.		22
Asi	Acer saccharinum	Silver Maple	50mm cal.	W.B.		9
Qr	Quercus rubra	Red Oak	50mm cal.	W.B.		30
Tc	Tilia cordata 'Greenspire'	Greenspire Linden	50mm cal.	W.B.		21
Um	Ulmus 'Morton'	Accolade Elm	50mm cal.	W.B.		9
Perennials & Grasses						
ca	Calamagrostis acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass		1 gal.	0.5m o.c.	38
ef	Euonymus fortuneii 'Coloratus'	Purple Leaf Wintercreeper		1 gal.	0.5m o.c.	31
he	Hemerocallis 'Stella de Oro'	Stella d'Oro Daylily		1 gal.	0.5m o.c.	25
hs	Hosta sieboldiana	Hosta		1 gal.	0.5m o.c.	20

GENERAL NOTES:

1. DEPICTED ON THIS PLAN ARE THE SPECIES AND THE APPROXIMATE LOCATION OF STREET TREES. ONCE DRIVEWAYS, SERVICES, UTILITIES, LIGHT STANDARDS AND OTHER ABOVE AND BELOW GROUND FEATURES ARE INSTALLED, THE EXACT LOCATION OF STREET TREES WILL BE STAKED ON SITE AND APPROVED BY THE LANDSCAPE ARCHITECT AND TOWN PRIOR TO PLANTING.
2. TREE PITS AND PLANTING BEDS FOR ALL TREES AND SHRUBS LOCATED WITHIN 1 METER OF UNDERGROUND UTILITIES OR SERVICES ARE TO BE HAND DUG.
3. ACTUAL LAYOUT OF TREES SHALL BE IN ACCORDANCE WITH THE FOLLOWING 'TABLE OF OFFSETS' :

TABLE OF OFFSETS THE FOLLOWING MINIMUM CLEARANCES FOR TREES SHALL APPLY:	
FIRE HYDRANTS	3.0m
DRIVEWAYS	1.5m
NEIGHBOURHOOD MAILBOXES	3.0m
HYDRO TRANSFORMERS	3.0m
BELL OR CABLE PEDESTALS	1.0m
STREETLIGHT POLES	5.0m
UNDERGROUND SERVICES	1.0m
FACE OF ALL WARNING SIGNS	18.0m

4. WHEN THE MINIMUM DISTANCES NOTED IN THE 'TABLE OF OFFSETS' CANNOT BE ACHIEVED, STREET TREES SHALL BE PLANTED IN AN ALTERNATE LOCATION APPROVED OR STIPULATED BY THE TOWN.
5. ALL PLANTING TO BE IN ACCORDANCE WITH NOTES AND DETAILS ON LD-1.

[redacted] 10/30/2019

CONTRACT DRAWINGS

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE CONSULTANT BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.

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NOTES

1. BASE PLAN PREPARED BY TATHAM ENGINEERING. (SEPTEMBER, 2019)
2. ALL DIMENSIONS IN METRES UNLESS OTHERWISE NOTED.

NO.	REVISIONS	DATE	INITIAL
1.	FIRST SUBMISSION	OCT. 09/19	AB

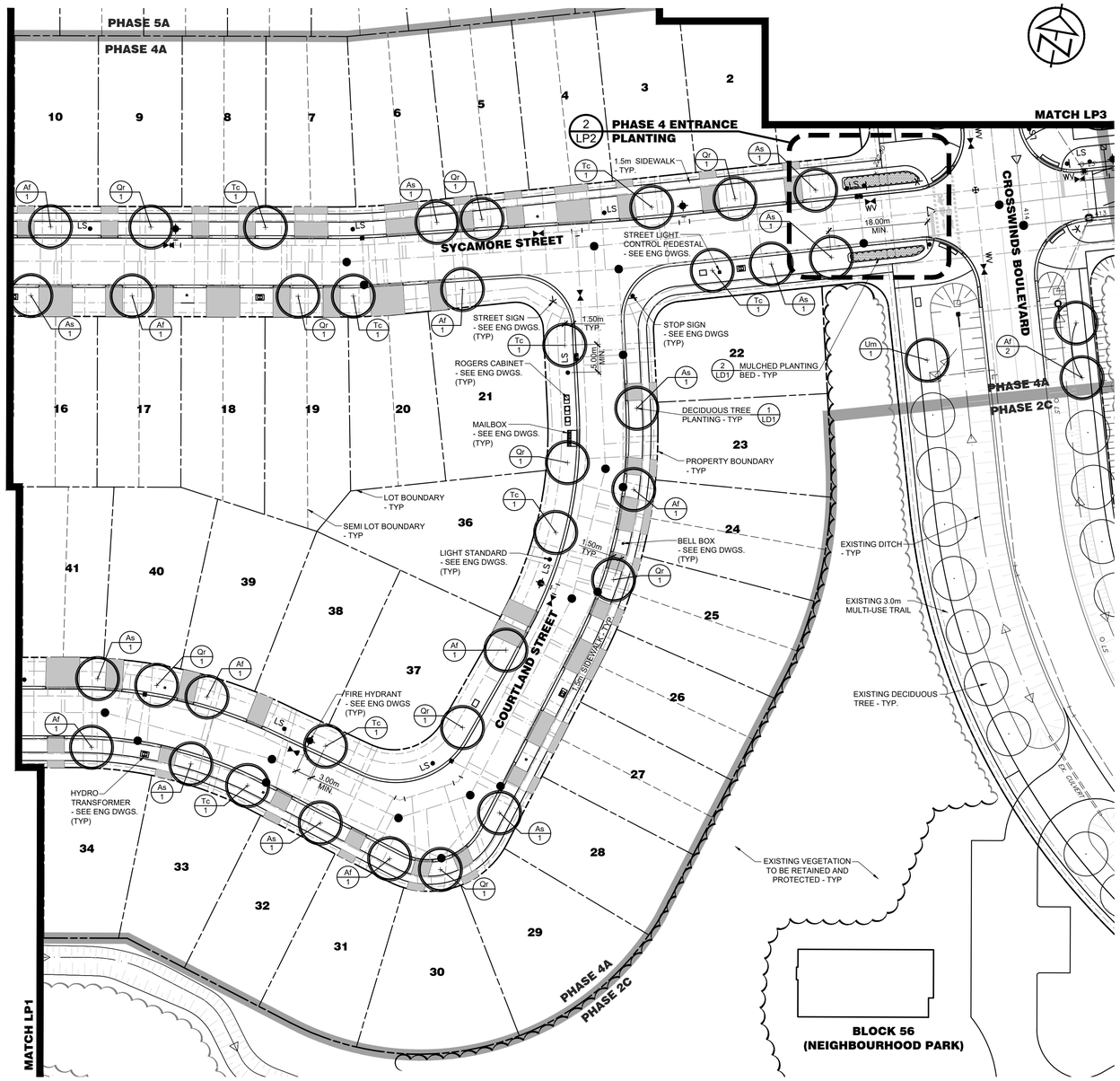
APPROVED [redacted]

WINDFALL - PHASE 4
TOWN OF THE BLUE MOUNTAINS

LANDSCAPE PLAN

ENVISIONTATHAM
115 Sandford Fleming Drive, Suite 200, Collingwood, ON L9Y 5A6
Tel. 705.445.0422
inquiry@envision-tatham.com

SCALE: 1:500 | JOB NO. ET111021-6
DESIGN: AB | CHECKED: AB
DRAWN: AJS | DATE: OCT. 7, 2019
DWG. **LP-1**

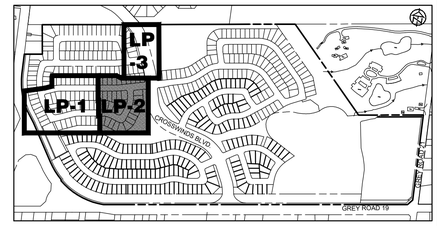


1 LP2 PHASE 4 LANDSCAPE PLAN (EAST)

1:500

LEGEND

- PROPERTY BOUNDARY
- LOT BOUNDARY
- SEMI LOT BOUNDARY
- PHASE BOUNDARY
- EXISTING VEGETATION
- EXISTING WATER VALVE
- EXISTING MANHOLE
- LS — LIGHT STANDARD - SEE ENG. DWGS
- HYDRO TRANSFORMER - SEE ENG. DWGS
- FIRE HYDRANT - SEE ENG. DWGS
- WATER VALVE - SEE ENG. DWGS
- MANHOLE - SEE ENG. DWGS
- CATCH BASIN - SEE ENG. DWGS
- SIGN - SEE ENG. DWGS
- COMMUNITY MAILBOX - SEE ENG. DWGS
- BELL BOX - SEE ENG. DWGS
- ROGERS CABINET - SEE ENG. DWGS
- UNDERGROUND SERVICES - SEE ENG. DWGS
- EXISTING DITCH
- DECIDUOUS TREE
- EXISTING DECIDUOUS TREE
- SHRUB GROUPING
- PERENNIALS AND GRASSES
- SPECIES / QUANTITY — SP 1 — PLANT REFERENCE TAG

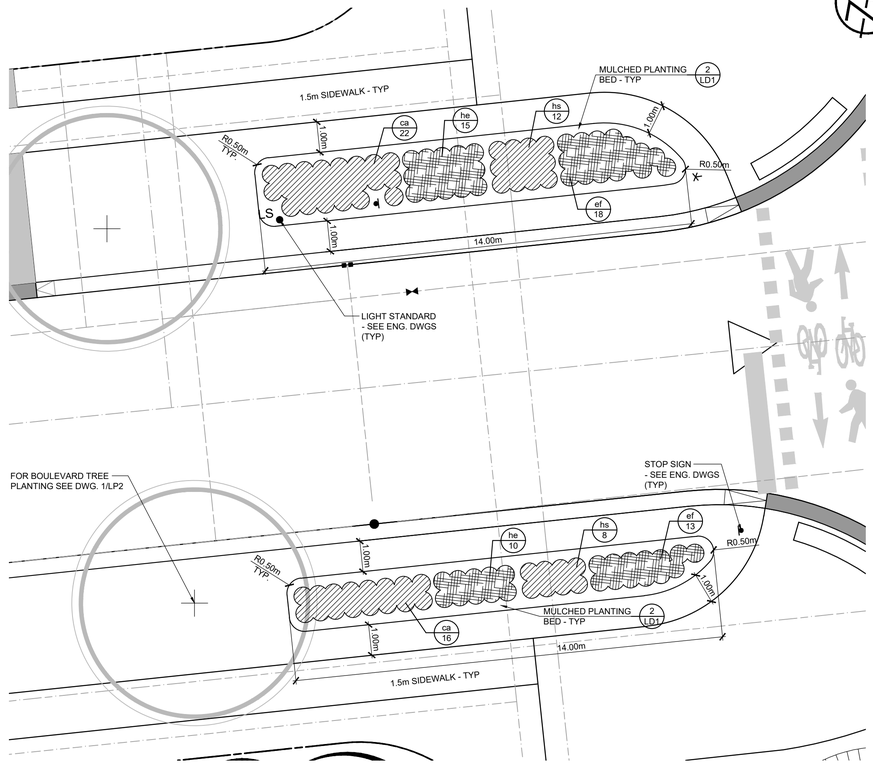


KEY PLAN NTS

NOTES:

1. FOR TREE SPECIES, QUANTITIES AND PLANT LAYOUT NOTES SEE LP-1.
2. ALL PLANTING TO BE IN ACCORDANCE WITH NOTES AND DETAILS ON LD-1.

[redacted] 10/30/2019



2 LP2 PHASE 4 ENTRANCE PLANTING

1:100

CONTRACT DRAWINGS

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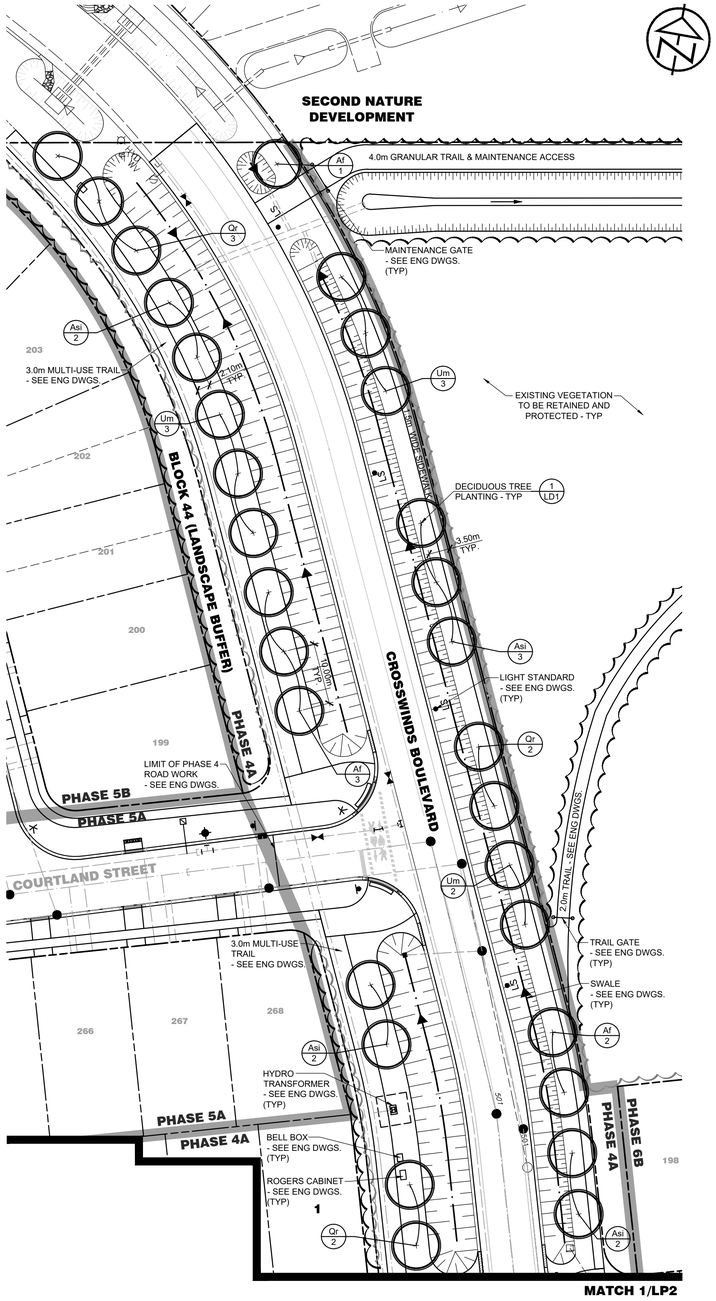
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WINDFALL - PHASE 4
TOWN OF THE BLUE MOUNTAINS

LANDSCAPE PLAN

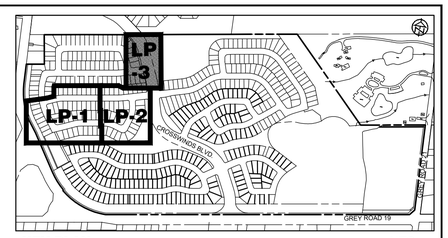
ENVISIONTATHAM
115 Sandford Fleming Drive, Suite 200, Collingwood, ON L9Y 5A6
Tel. 705.445.0422
inquiry@envision-tatham.com

SCALE: AS SHOWN		JOB NO.	ET111021-6
DESIGN: AB	CHECKED: AB	DWG.	LP-2
DRAWN: AJS	DATE: OCT. 7, 2019		



LEGEND

- PROPERTY BOUNDARY
- LOT BOUNDARY
- SEMI LOT BOUNDARY
- SWALE - SEE ENG. DWG
- PHASE BOUNDARY
- EXISTING VEGETATION
- EXISTING WATER VALVE
- EXISTING MANHOLE
- LIGHT STANDARD - SEE ENG. DWGS
- HYDRO TRANSFORMER - SEE ENG. DWGS
- FIRE HYDRANT - SEE ENG. DWGS
- WATER VALVE - SEE ENG. DWGS
- MANHOLE - SEE ENG. DWGS
- CATCH BASIN - SEE ENG. DWGS
- SIGN - SEE ENG. DWGS
- COMMUNITY MAILBOX - SEE ENG. DWGS
- BELL BOX - SEE ENG. DWGS
- ROGERS CABINET - SEE ENG. DWGS
- UNDERGROUND SERVICES - SEE ENG. DWGS
- EXISTING DITCH
- DECIDUOUS TREE
- PLANT REFERENCE TAG (SPECIES / QUANTITY)



KEY PLAN NTS

NOTES:

1. FOR TREE SPECIES, QUANTITIES AND PLANT LAYOUT NOTES SEE LP-1.
2. ALL PLANTING TO BE IN ACCORDANCE WITH NOTES AND DETAILS ON LD-1.

[redacted] 10/30/2019

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NOTES

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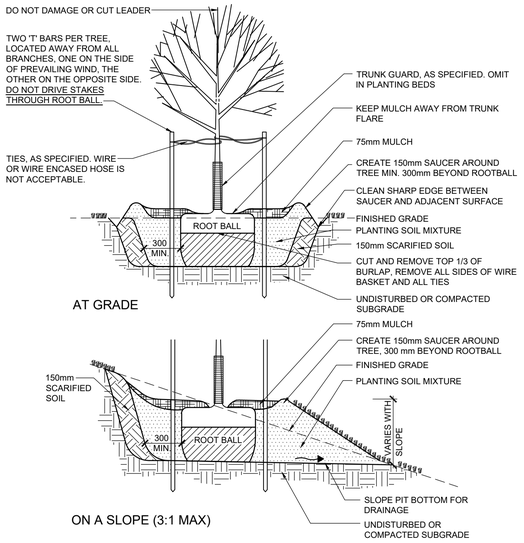
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WINDFALL - PHASE 4
TOWN OF THE BLUE MOUNTAINS

LANDSCAPE PLAN

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SCALE: 1:500		JOB NO.	ET111021-6
DESIGN: AB	CHECKED: AB	DWG.	LP-3
DRAWN: AJS	DATE: OCT. 7, 2019		

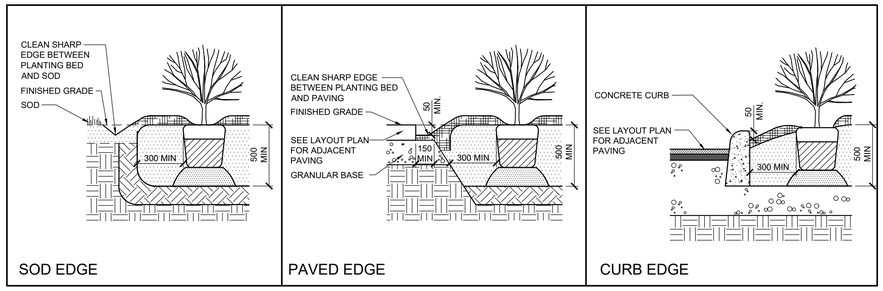


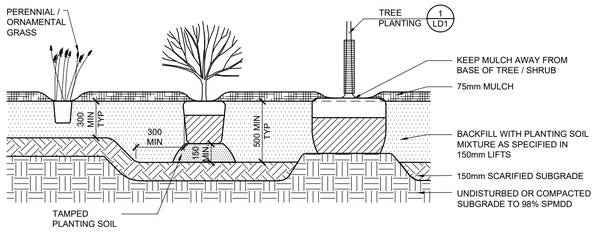
NOTES

1. ALL MATERIALS ARE SPECIFIED IN THE GENERAL PLANTING NOTES.
2. DO NOT ALLOW AIR POCKETS WHEN BACKFILLING.
3. POSITION CROWN OF ROOT BALL 75mm ABOVE FINISHED GRADE TO ALLOW FOR SETTLING.
4. CORRECTIVE PRUNE TO RETAIN NATURAL FORM OF TREE AS DIRECTED BY THE LANDSCAPE ARCHITECT, INCLUDING REMOVAL OF DEAD, BROKEN, OR CROSSING BRANCHES. DO NOT REMOVE MORE THAN 20% OF LIVE CANOPY.
5. FOR TREES PLANTED WITHIN PLANTING OR SHRUB BEDS, DELETE SAUCER AROUND BASE OF TREE.
6. NO TREE PITS SHALL BE LEFT OPEN OVERNIGHT.
7. STAKES AND TIES TO BE REMOVED ONE YEAR AFTER PLANTING.

1 LD1 DECIDUOUS TREE PLANTING

NTS





NOTES

1. ALL MATERIALS ARE SPECIFIED IN THE GENERAL PLANTING NOTES.
2. DO NOT ALLOW AIR POCKETS WHEN BACKFILLING.
3. ENSURE SOIL SETTLEMENT HAS OCCURRED PRIOR TO MULCHING.
4. PLANTING SOIL DEPTH MAY BE 300mm (MIN.) UNDER PERENNIALS.
5. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND OFFSITE DISPOSAL OF EXCAVATED MATERIAL FROM PLANTING BED CONSTRUCTION.

2 LD1 MULCHED PLANTING BED

NTS

GENERAL NOTES:

1.0 LAYOUT

1. SUPPLY AND INSTALL TREES, SHRUBS AND GROUNDCOVERS IN ACCORDANCE WITH THE APPLICABLE DETAILS AND SPECIFICATIONS.
2. PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE CANADIAN LANDSCAPE STANDARD (LATEST EDITION), PUBLISHED BY THE CANADIAN NURSERY LANDSCAPE ASSOCIATION AND THE CANADIAN SOCIETY OF LANDSCAPE ARCHITECTS, EXCEPT WHERE SPECIFIED OTHERWISE.
3. ALL PLANTS SHALL BE SUPPLIED AS SPECIFIED IN THE 'PLANT LIST'. SUBSTITUTIONS WILL NOT BE ACCEPTED UNLESS APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.
4. ALL MATERIALS TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
5. MULCH TO BE SHREDDED CEDAR BARK FREE OF DYES AND CHEMICALS, OR APPROVED EQUAL.
6. PLANTING SOIL MIXTURE SHALL BE TWO PARTS SCREENED TOPSOIL TO ONE PART SCREENED COMPOST WITH BONEMEAL APPLIED AT A RATE OF 0.6KG PER CUBIC METRE, AS SPECIFIED. CONTRACTOR SHALL PROVIDE SOURCE AND SAMPLE OF SOIL MIXTURE, AS SPECIFIED, FOR APPROVAL PRIOR TO COMMENCING WORK.
7. TREE STAKES TO BE 1800mm LONG HEAVY DUTY GAUGE T-BARS.
8. TIES SHALL BE WOVEN POLYPROPYLENE PROPRIETARY TIE SYSTEMS THAT REMAIN FLEXIBLE DURING WINTER MONTHS. 50mm WIDE BURLAP STRIPS LOOPED IN A LOOSE FIGURE 8 AND SECURED WITH WIRE TIES ARE ALSO ACCEPTABLE.
9. TRUNK PROTECTION TO BE 100mm DIA. HDPE PIPE, 500mm LONG OR TO LOWEST BRANCH, EXCEPT IN SWM PONDS AND NATURALIZATION AREAS WHERE IT IS TO BE WHITE SPIRAL PLASTIC TREE GUARD.
10. STAKES AND TIES SHALL BE REMOVED 1 YEAR AFTER PLANTING.
11. TRUNK PROTECTION SHALL BE REMOVED AT COMPLETION OF WARRANTY PERIOD.
12. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND OFFSITE DISPOSAL OF EXCAVATED MATERIAL FROM PLANTING BED CONSTRUCTION AND TREE PIT EXCAVATION.

[redacted] 10/30/2019

CONTRACT DRAWINGS

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND BE RESPONSIBLE FOR SAME. ANY DISCREPANCIES MUST BE REPORTED TO THE CONSULTANT BEFORE COMMENCING WORK. DRAWINGS ARE NOT TO BE SCALED.

ENVISION-TATHAM CLAIMS COPYRIGHT TO THIS DOCUMENT WHICH MAY NOT BE USED FOR ANY PURPOSE OTHER THAN THAT PROVIDED IN THE CONTRACT BETWEEN THE OWNER/CLIENT AND THE LANDSCAPE ARCHITECT WITHOUT THE EXPRESS CONSENT OF ENVISION-TATHAM

NOTES

1. ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE INDICATED.

NO.	REVISIONS	DATE	INITIAL
1.	FIRST SUBMISSION	OCT. 09/19	AB

APPROVED [redacted]

WINDFALL - PHASE 4
TOWN OF THE BLUE MOUNTAINS

LANDSCAPE DETAILS

ENVISIONTATHAM
115 Sandford Fleming Drive, Suite 200, Collingwood, ON L9Y 5A6
Tel. 705.445.0422
inquiry@envision-tatham.com

SCALE: AS SHOWN
DESIGN: AB
CHECKED: AB
DRAWN: AJS
DATE: OCT. 7, 2019

JOB NO. ET111021-6

DWG. **LD-1**