Discharge rates (cfs) with expanded DI grading and trail extention to Terrace View W

	Existing	Proposed	Change
2 YR:	15.8	16.3	+0.5
10 YR:	17.9	19.2	+1.3
100 YR:	31.8	31.3	-0.5

LEGEND

- CONSTRUCTION LIMITS
- PROPOSED TRAIL
- UNKNOWN/CONSTRUCT BY OTHERS
- PROPOSED STORM SEWER/CULVERT (AS SHOWN IN CURRENT CONSTRUCTION PLANS)
- ADDITIONAL PROPOSED STORM SEWER/CULVERT (NEEDED FOR TRAIL)
- EXISTING STORM SEWER/CULVERT
- PROPOSED DITCH (REALIGNED FOR TRAIL)
- EXISTING/PROPOSED APRON
- EXISTING/PROPOSED DROP INLET
- DIRECTION OF PROPOSED FLOW

TERRACE VIEW W

℄ NB TH 22

695

700

705

31'

10'

25'

RESET 2018 CONSTRUCTED CULVERT WITH THE SECOND CULVERT ADDITION

Improved inlet (existing Beehive to proposed M11) provides more inlet capacity compared to the existing condition. This allows the DI HWL to not increase from existing conditions

With the trail extention to Terrace View West, a second culvert will need to be added at this crossing. This will allow added trail flow to pass through without overtopping the trail in a 10 Yr event.

0 50 100
SCALE IN FEET

H:\Projects\10000\10321\CAD_BIM\Graphics\WR\10321_TrailAnalysis_Geometrics2.dgn

PRELIMINARY TRAIL ADDITION GEOMETRICS

TH 22 / CSAH 90

Job #10321
6/8/2018

Figure 2

LEGEND

- CONSTRUCTION LIMITS
- PROPOSED TRAIL
- UNKNOWN/CONSTRUCT BY OTHERS
- PROPOSED STORM SEWER/CULVERT (AS SHOWN IN CURRENT CONSTRUCTION PLANS)
- ADDITIONAL PROPOSED STORM SEWER/CULVERT (NEEDED FOR TRAIL)
- EXISTING STORM SEWER/CULVERT
- PROPOSED DITCH (REALIGNED FOR TRAIL)
- EXISTING/PROPOSED APRON
- EXISTING/PROPOSED DROP INLET
- DIRECTION OF PROPOSED FLOW

℄ NB TH 22

705

710

715

720

300

31'

10'

25'

46'

30'

TERRACE VIEW E

UNKNOWN OUTFALL LOCATION

SEE INSET FOR OPEN SYSTEM OPTIC

EXTEND 2018 CONSTRUCTED ROADWAY SUBDRAIN OUTLET TO EAST SIDE OF TRAIL.

Junction manhole for existing connection

EXTEND EXISTING SUBDRAIN

193RD LANE

ALIGNMENT SHIFT 6.50' RT STA 718+00.00

REMOVE 2018 CONSTRUCTED CULVERT

REMOVE 2018 CONSTRUCTED CULVERT APRON. CONNECT TO MH.

PED UNDERPASS EXTENSION/ TRAIL REDESIGN/EXISTING DI AND STORM SEWER ADJUSTMENT TO BE COMPLETED BY OTHERS.

UNKNOWN OUTFALL LOCATION. INVESTIGATE CONNECTION TO UNKNOWN STORM SEWER SYSTEM

INSET - OPEN SYSTEM

Rates decreasing due to upstream Q decrease from reduced impervious at roundabout.

Assuming the trail will need to connect into the cart path, rather than running over the ped underpass as previously proposed, a roadway ditch will not be able to be constructed to flow south. This will cause increased rates to the ped underpass drainage system by up to appox. 2 cfs in a 100 yr event, and around 0.7 cfs in a 2 yr event. Actual increased discharge rates should be lower, but without knowing the new trail alignments here, a full discharge rates analysis can not be performed.

H:\Projects\10000\10321\CAD_BIM\Graphics\WR\10321_TrailAnalysis_Geometrics.dgn

SRF

PRELIMINARY TRAIL ADDITION GEOMETRICS

TH 22 / CSAH 90

Job #10321
6/8/2018

Figure 1