



Russell Planning and Engineering, Inc.
934 Main Ave. Unit C
Durango, CO 81301

January 11, 2017

Mr. Mark Fratrack
Village Administrator
Village of Taos Ski Valley
7 Firehouse Rd.
Taos Ski Valley, NM 87525

RE: Analysis of sanitary sewer back-up locations and mitigation plans for sanitary sewer infrastructure installed in 2015 and 2016.

Dear Mark,

We have reviewed the new sewer improvements installed during the summers of 2015 and 2016 within the Village of Taos Ski Valley in terms of likelihood, location and mitigation of any potential overflowing events. It is important to note that probability of overflowing manholes within the newly-installed manholes and sewer pipe segments is now further reduced due to up-sizing of the sewer lines per the VTSV Sewer Master Plan, and the installation of the new sewer pipes to a proper slope (i.e. no vertical sags as exhibited by the former sewer pipe in this location).

In the unlikely event of a manhole overtopping, we have outlined mitigation plan for each manhole of concern below. We have also attached an exhibit showing the manholes within the corridor between the Blake Hotel and Lake Fork of the Rio Hondo – known locally as “Siberia”.

Manhole A1 - Armadillo Parking Lot)

- This manhole ties the new, 12-in HDPE sewer line into the existing VTSV sewer system consisting of a slip-lined clay pipe with a resulting inner diameter of approximately 7-in. Until the Village can upgrade the existing lines to the size called for in the Master Sewer Plan, this manhole has a higher chance of blockage than all other manholes installed in 2015 and 2016 due to the pipe size reduction. In the event of an overtopping event, the flow will be contained within the roadside ditch on the north side of the parking lot and routed to the next manhole downstream of manhole A1 via an earthen berm constructed as part of the mitigation.

Manhole B1 - Intersection of Sutton Place and Siberia

- Should sewer manhole B1 overtop, the overflow will be routed downhill along the curb and gutter on the west side of Sutton Place and into sewer manhole A5 via an earthen berm constructed as part of the mitigation.

Manhole B2 – West Siberia

- Should sewer flows back up within manhole B2, the locking manhole lids of manholes B2 and B3 will develop internal pressure sufficient to back-up the flow out of the bathroom floor drain within the parking garage of the Blake Hotel, elevation 8408.0. The sewer flows would be intercepted within the 6-ft diameter manhole B5 and either routed overland via pump and hose or vac-trucked to the next clear downstream manhole.

Manhole B3 – Central Siberia

- Should sewer flows back up within manholes B3 or B3.5, the locking manhole lid will develop internal pressure sufficient to back-up the flow out of the loading dock grease trap manholes of the Blake Hotel. The sewer flows would be intercepted within the 6-ft diameter manhole B5 and either routed overland via pump and hose or vac-trucked to the next downstream manhole.

Manhole B3.5 – Eastern Siberia

- Should sewer flows back up within manhole B3.5, the locking manhole lid will develop internal pressure sufficient to back-up the flow out of the loading dock grease trap of the Blake Hotel. The sewer flows would be intercepted within the 6-ft diameter manhole B5 and either routed overland via pump and hose or vac-trucked to the next downstream manhole.

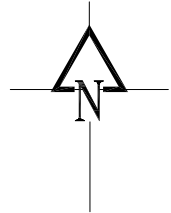
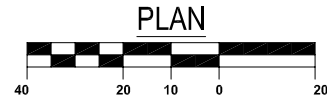
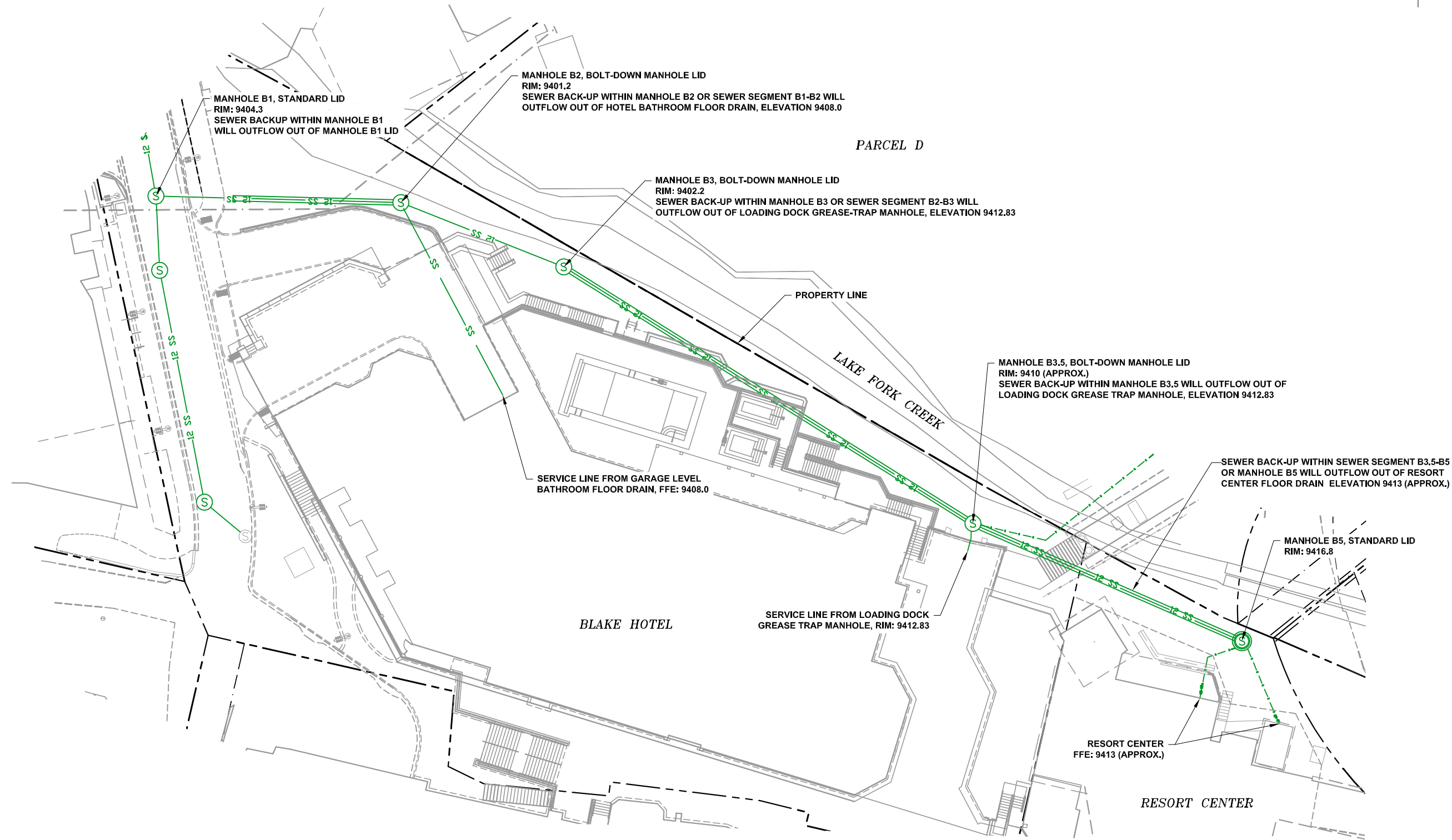
Manhole B5 – Intersection of Loading Dock and the future West Burroughs Road

- Should sewer flows back up within manhole B5, the manhole would backup out of the floor drains of the Resort Center, approximate elevation 8413 before flowing out of the manhole. The sewer flows would be intercepted at the future 6-ft diameter manhole B6 and either routed overland or vac-trucked to the next downstream manhole.

Sincerely,
Russell Planning and Engineering, Inc.

A handwritten signature in blue ink, appearing to read 'D. Chandler', with a stylized flourish at the end.

Drew Chandler, PE
Engineering Manager



REVISIONS:

VILLAGE OF TAOS SKI VALLEY
VTSV INFRASTRUCTURE
MANHOLE BACK-UP EXHIBIT

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Drawn: DC
Drafted: CO
Checked: DC

Date of Submittal
01/09/2016

1 OF 1

EX-1

811
Know what's below.
Call before you dig.
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EXHIBIT