

Memorandum

NORTH OLMSTED ENGINEERING

December 17, 2007

To: Planning Commission Members
Kimberly Wenger, Director of Planning
Bryan O'Malley, Assistant Director of Law
David Conway, Building Commissioner
Daniel J. Collins, P.E., City Engineer

From: Cathy Becker, P.E., Assistant City Engineer CB

**Re: Planning Commission Agenda Item – Biddulph Trail Cluster Homes,
25747 Butternut Ridge Road**

Existing 36-inch Sanitary Sewer

A videotape from 1995 of the existing 36-inch diameter sanitary sewer through the proposed Biddulph Trail Cluster Homes site was reviewed. The 36-inch pipe serves most of the area of North Olmsted south of Lorain Road and west of the project site. The sewer is constructed of reinforced concrete pipe. The video covered an area from approximately 450 feet upstream of the site to the manhole on the west side of Great Northern Blvd. The video shows that in 1995 the line and grade of the sewer was good and the condition of the pipe was fair. No storm water infiltration was noted on the video. The pipe was flowing about 1/3 full. However, it may be concluded that since there was a significant amount of toilet paper hanging from the top of the pipe that the pipe flows full during storm events. So there is infiltration in the upstream contributing area and possible surcharging of the pipe during storm events.

In October of 1985 a sanitary sewer manhole on the 36-inch sewer was bolted down by the City of North Olmsted Service Department. It was bolted down because the sewer had surcharged.

Note that the new sanitary sewer in the proposed Biddulph Trail Cluster Homes development will be constructed of PVC and there should not be any storm water infiltration into this PVC pipe.

See the attached report from Sanitary Sewer Supervisor Bob Binggeli. Sanitary Sewer Supervisor Bob Binggeli plans to bolt down two additional manholes on the east side of Columbia Road in the near future to prevent those from surcharging.

FILE COPY

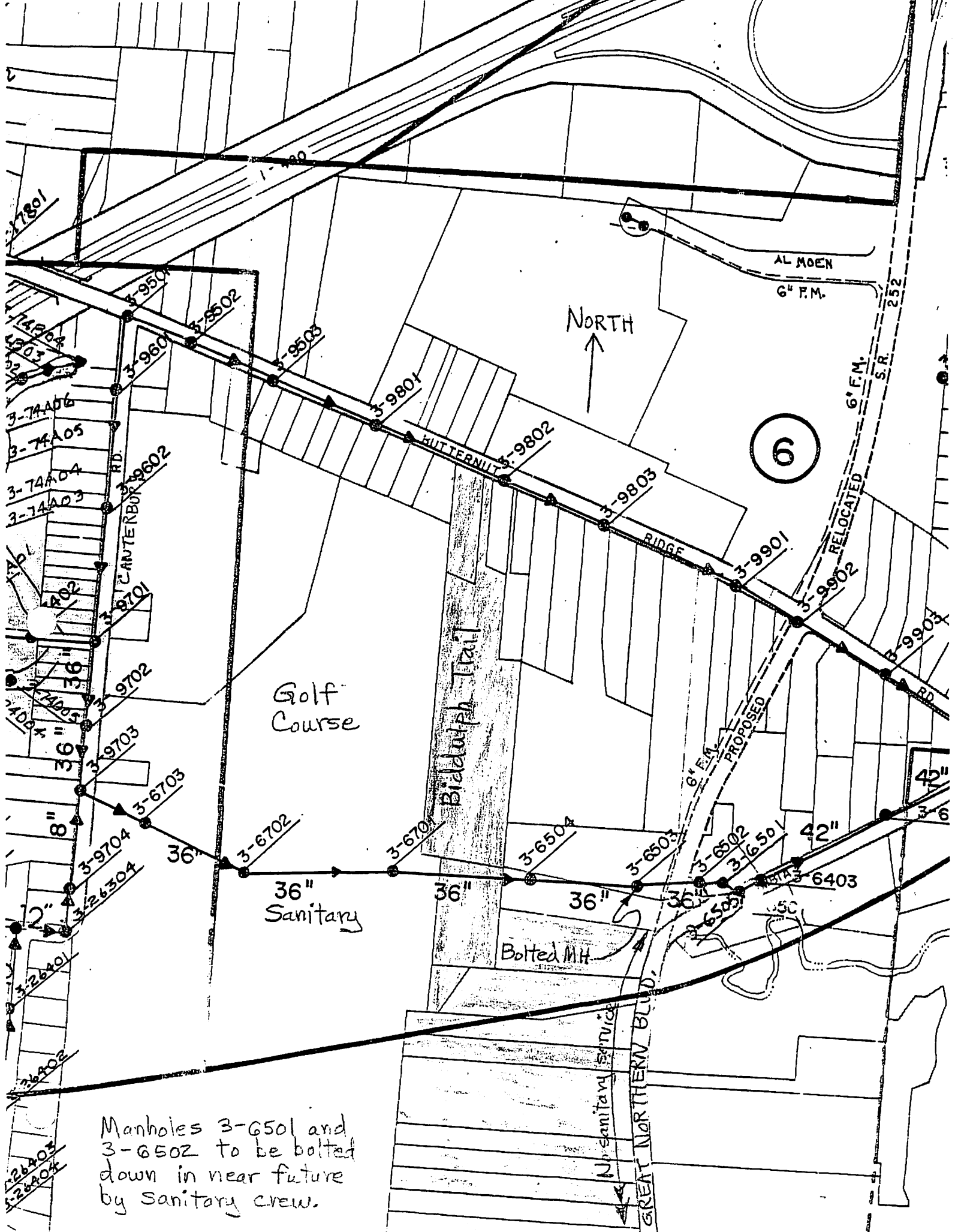
Unsewered Area on Columbia Road

There are ten existing homes on the west side of Columbia Road south of the 36-inch sanitary sewer that do not have sanitary sewer service. They have septic tanks (some of which are failing). The elevation of at least two of these homes is too low to allow them to be tied into the existing 36-inch sanitary sewer. In order to provide access from the proposed sanitary sewer in the Biddulph Trails Cluster development, it would be necessary to cross the river at one or two locations and provide a pump station to raise the sewage to the 36-inch sanitary sewer. A new gravity-flow sanitary sewer would be needed to convey the flow from the homes to the pump station.

The new sanitary sewer will need to be located in the rear yards of most of these properties since the elevation of their properties on Columbia Road is higher than the elevation of the homes. In order to convey the flow from the pump station, a sanitary force main would be required to cross the Biddulph property so that it can be tied into the 36-inch sewer. One option (for which the Director of Public Service also gave his approval) to aid these homeowners would be to require the developer to reserve a 40-foot wide easement for this future sanitary sewer crossing through the Biddulph property. The crossing would be located adjacent to the 24-inch storm sewer easement shown on the development plan. The storm sewer could also be located in this easement. However, in order to provide space for the sanitary sewer easement and force main, one housing unit may need to be eliminated.

The City of North Olmsted is required by Ohio EPA (as part of its Phase II storm water permit) to declare what it intends to do (either provide sanitary sewer service or leave it unsewered) with this area by March of 2008.

Attachments



Manholes 3-6501 and 3-6502 to be bolted down in near future by Sanitary crew.

Cathy Becker

From: Bob Binggeli [binggelib@north-olmsted.com]
Sent: Thursday, December 06, 2007 8:13 AM
To: 'Cathy Becker'
Cc: 'Sharon Schlemmer'; 'Duane Limpert'
Subject: RE: 5994 Columbia Rd. M.H.# 3-6503

Cathy,

I'll make sure you get a copy of the work order from 1985. I was the back hoe operator on the actual installation. It's obvious that this 36" sewer main in question does now and has been surcharging previous to 1985. That was the reason we installed the new manhole ring and bolt down cover. Many of our sewer mains surcharge, this one happens to be a problem due to the valley (elevation) that it runs through. The work order references Joe Schaller (I believe he was the City engineer in 1985) It reads-Purchase & install Per Joe Schaller. Shown on original Floyd Brown Study. Possibly there is a 22 year old study in the archives that could shed some light on this sewer main surcharging. I've pulled any information from the sewer files for 6181, 5994, 5991, 5988, and 5984 Columbia Rd. Any sewer problems called in to the city were problems toward the house or storm sewer concerns in the back yards. There were zero complaints caused by the sanitary sewer main surcharge. Since the bolt down cover was installed on M.H.# 3-6503 22 years ago, I am not aware of any complaints on the south side of new Columbia Rd. Although I do remember the systems crew noticing some paper and debris around M.H# 3-6501 a week or so after a huge rain event. This is the second M.H. north of the new Columbia Rd. I would like to have the Engineering Dept. thoughts on what we should do with this man hole and also M.H.# 3-6602. My suggestion would be to install a bolt down ring and cover on M.H.# 3-6501 and raise M.H.#3-6602 to avoid any future sanitary overflows. My concern is, will this create a problem up stream during large rain events?

My opinion about the future 29 dwellings is that it will have very little effect on this sewer main during rain events. The new units and branch sewer mains will be PVC pipe and water tight. I'm also very confident that our Building Dept. will make sure that there will be zero cross connections of the storm sewer downspouts and footer drains.

Regarding the approximately dozen residents south of Butternut Ridge Rd. I do remember Dennis Long asking my opinion and thoughts about these homes. I told him that the only way I could see these homes being connected to our sewer system would be to install a sewer main behind the rear properties. From what I recall there would still be 1 or 2 homes that the elevation would not allow gravity sewers. I do know that Dennis did speak with Paul Deichmann about this, and I don't believe the surcharging sewer main was a deciding concern.

Bing

From: Cathy Becker [mailto:beckerc@north-olmsted.com]
Sent: Tuesday, December 04, 2007 8:43 AM
To: 'Bob Binggeli'
Cc: 'Sharon Schlemmer'; 'Duane Limpert'
Subject: RE: 5994 Columbia Rd. M.H.# 3-6503

Bing, please also forward a copy of the work report. Thanks. Cathy

From: Bob Binggeli [mailto:binggelib@north-olmsted.com]
Sent: Tuesday, December 04, 2007 8:30 AM
To: Cathy Becker
Cc: Sharon Schlemmer; Duane Limpert
Subject: 5994 Columbia Rd. M.H.# 3-6503

Cathy,

I was off from work yesterday due to a family medical emergency. I'm scheduled for a waste water seminar today. If I don't get an e-mail to you today, I'll definitely get one off tomorrow. So far in the research I have done, we installed a new manhole ring with a bolt down lid 10/16/85. I have a copy of the work order.

Bing

Cathy Becker

From: Bob Binggeli [binggelib@north-olmsted.com]
Sent: Wednesday, December 12, 2007 8:14 AM
To: Cathy Becker
Cc: Sharon Schlemmer
Subject: Report to D. Collins

Cathy,

I'm sending this email today because I was off sick yesterday. I'm not sure if it showed but I was in a mental fog in our meeting Mon. due to the flu or whatever it was. That brings me to the question I have for you. Are you still going to write a report for K. Wenger and D. Collins adding some of the info. I sent you in my email? In the meeting Monday, I didn't feel that we really spoke that much about the surcharging 36" sanitary main. I'm going to go ahead and bolt down the 2 sanitary manhole covers # 3-6501 and # 3-6602 to avoid any future S.S.O.'S. I don't feel that this will cause any back-ups into basements due to the elevation of the homes in the area. I just hope that this won't cause a problem with manhole # 3-6503 that we bolted down 22 years ago. I'm not sure if I my concern was evident in our meeting.

Thanks,

Bing

CITY OF
NORTH OLMS TED

236-23-29

DATE 9 / 3 / 85 TAKEN BY P. Patton WARD 4

NAME Mr. A. Jacobs PHONE 777-1608

ADDRESS 5994 Columbia Road

COMPLAINT Sanitary manhole raises up 1½ to 2' and
spills sewerage onto his property and into his
garage. Wants to know if WWTP can bolt lid
down to prevent this. This manhole is 4' above
his driveway.

REFERRED TO WWTP - PURCHASE & INSTALL
PER JOE SCHALLER, SHOWN
ON ORIGINAL FLOYD BROWE
STUDY,

DATE: 9/5/85 BY: P. Patton

PROJECTED SCHEDULE

WORK DONE Replaced man hole ring + cover with Bolt
down lids + rings (2)

O.K. [Signature] 10/18/85

DATE COMPLETED 10-16-85 BY: KK RB, MW

WORK ORDER

E 2108