**HART ENGINEERING**
RESIDENTIAL, COMMERCIAL & MUNICIPAL SITE DESIGN & DEVELOPMENT

1969 FERNDALE ROAD CASTLETON, NY 12033

(518) 479-4014 FAX (518) 477-6371
STEVEN P. HART, P.E.

June 24, 2022

East Greenbush Town Hall
% Planning Department
225 Columbia Turnpike
Rensselaer, New York 12144
Attn: Ms. Anna Feltham, Director of Planning

Re: Immanuel Church Site Plan – Preliminary/Final Plan Submittal
Onderdonk Avenue, Town of East Greenbush

Dear Ms. Feltham:

Attached please find one (1) copy of the revised subdivision plans and swppp for the above referenced project. Please note that these plans have been revised with respect to Planning Board, Project Review Team and Stantech Consulting Services review letter. With respect to the Stantech comment letter, dated April 29, 2022 we offer the following responses, which are enumerated to match the comment letter.

General

1. The application is subject to the Town of East Greenbush Generic Environmental Impact Statement and associated mitigation fees for the following:

a. GEIS preparation (provide Peak PM Trips)
b. Land Use (provide Peak PM Trips)
c. Water/Sewer (provide EDU Count)
d. Recreation (Currently 10,000 square foot building)
e. Traffic (provide Peak PM Trips)

Provide the expected vehicle trips for the peak hour and EDU calculations for the Town to verify mitigation fees.

**Response: see attached letter from the Church. The total number of trips during the Peak hour has been estimated at 3. Please note that the full potential build out of the Church is 12,000 SF, however it is still not confirmed that this will be built initially as that is dependent upon the cost. The hope is that at a minimum 9600 sf will be built.**

2. Provide Lot Line Adjustment fee of $200.00, Major Site Plan sketch plat review fee of $750.00 was received at time of application (December 3, 2020).

**Response: the $200 FEE will be submitted for the lot line adjustment.**

Traffic

3. Peak traffic generated by a church use is typically during the off-peak of the adjacent road traffic. However, the Applicant should provide information with respect to types and frequency of events during the weekday morning peak 7:00 am – 9:00 am and weekday evening peak 4:00 pm – 6:00 pm and estimated traffic generated.

**Response: As noted above, this letter has been attached.**

4. Site distance should be shown on the Site Plan or NYSDOT Curb Cut Plan.

**Response: The site distance has been added on the site plan.**

5. Pedestrian access along the property frontage is limited. Sidewalks are generally located on the east side of Columbia Turnpike within the area. The Planning Board should discuss if there is any need for pedestrian facilities.

**Response: Following discussions with the Town, it is our understanding that sidewalks are not needed on this side of the road.**

Site Plans

C000 - Cover

6. Check the Proposed Parcel Area in the Bulk Table – there seems to be a discrepancy between the 279,501 sf in the table and the values in the Area Tabulation Table of Sht. X020.

**Response: This has been corrected.**

7. Add a note to accompany the Bulk table that states the existing lot area and the proposed lot area after the proposed lot line changes.

**Response: This note has been added to the table.**

8. Parking calculation has a typo – should be 1 per every 4 assembly seats. The number of assembly seats should be foot-noted in the parking table to allow the assessment if excessive or inadequate parking is provided.

**Response: This note has been foot noted.**

9. Remove duplicate Planning Board contact information on cover page under Project Contact List

**Response: This has been corrected.**

C001 – General Notes & Legend

10. General Note #8 is missing.

**Response: This has been corrected.**

11. Add a note referencing the date of the survey and survey firm if different than Hart Engineering.

**Response: This has been added. John Dunn , LS is the surveyor of record.**

12. Reflect the installation of the infiltration basins and swales in the Sequence of Construction notes. Specify that these features will be constructed after contributing land disturbances have received temporary stabilization or specify that robust erosion controls will be provided upgrade of all infiltration practices until upgrade areas are stabilized.

**Response: This has been added.**
13. Sewer Note #7 – specify testing is for sewer force mains.
**Response: This note has been revised.**
14. Water Main Installation #7 – remove reference to shutdown of existing water main.
**Response: This note has been removed.**
15. Department of Public Works to provide tapping sleeve specifications, full stainless steel wraparound.
**Response: we have called out the stainless steel full wrap around tapping sleeve.**
16. Water System Test #1 – check consistency with utility plan.
**Response: This note will be revised to call out C900 pipe.**
17. Sanitary Sewer #10, 11, 13, and 15 – 18 – remove superfluous information.
**Response: extra information has been removed.**

X020 – Subdivision Plat

18. Check the areas shown on the table and on the plan for area to be conveyed to Michael A. Susko – there seems to be a discrepancy.
**Response: this has been corrected**
19. Developer shall provide easement, approximately 35' by 20' at dead end of Onderdonk Ave. for use by the Town of East Greenbush Department of Public Works.
**Response: an easement area has been added. Please confirm that this suffices.**
20. Show ownership and deed reference for right-of-way Onderdonk Ave.
**Response: This is owned by the Town.**
21. Show map references, NYSDOT takings maps
**Response: information as shown is up to date, unless you sense there has been recent takings, please advise.**
22. Is access line shown onto Columbia Turnpike existing or proposed? Clarify.
**Response: there are no new lines being proposed. This has been corrected.**
23. Provide status of communication with owner(s) of proposed lot line adjustment(s) regarding conveyance of land.
**Response: Information has been sent to the owners. Please note that if Owners do not want added land that we do not intend to convey it.**

X010 – Existing Conditions & Demo Plan

24. If the crusher run parking area is to be constructed in the future, we recommend that the area of this parking not be cleared until the time of construction of that lot. Applicant to clarify if this parking is a future phase and identify the phased clearing areas on Sht. X010 if applicable.
**Response: the overflow "future" crusher run parking lot has been called out to not be cleared until such time the added parking is needed.**
25. The plan includes removal of vegetation, water line, utilities within the ROW and removal of a retaining wall on an adjacent parcel. Provide justification for this work and Authorization to perform the off-property work.

**Response: Work on any adjoining parcels has been removed.**

C010 – Site & Utility Plan

26. Four (4) ADA accessible spaces are proposed. Ninety one (91) paved spaces and seventy (70) spaces identified as overflow and surfaced with crusher run are shown on the Site Plan. Four (4) ADA accessible spaces are sufficient for the ninety one (91) space main parking area. The Applicant should discuss the intention of the overflow lot and whether additional ADA accessible spaces are warranted to meet the NYS Building Code requirements.

Response: **Additional ADA spaces (6 total) have been provided to compensate for the future parking.**

27. Provide justification for not using pervious pavers or other permeable materials in overflow lot.

**Response: We are using infiltration practices to treat the surface water. Pavers are an expensive option for large lots.**

28. A proposed two-lane access is proposed onto Columbia Turnpike at an existing curb cut for a limited use gravel drive into the property. The improvements will require review and a permit from NYSDOT. The Applicant should provide some type of indication from NYSDOT that they conceptually approve of the location and configuration of the entrance.

**Response: We have shared these plans with DOT and have met with DOT on site to discuss this project. We will forward any DOT correspondence with the Town.**

29. Is the proposed sidewalk along the building flush with the asphalt parking? If no, then the limits of the dropped curb for ADA access from the parking spaces should be indicated.

**Response: The walks are flush and spot elevations have been added to the grading plan.**

30. Add sign locations for the handicap spaces and accessible spaces.

**Response: Sign locations have been added.**

31. The project is proposing a low pressure grinder pump system for sanitary sewer. The Applicant should verify with the Town's Sewer Department that there is sufficient capacity in the sewer on Columbia Turnpike to accept the flow from the project.

**Response: According to Mr. Dan Fiacco, Commissioner of Public Works, the town has the capacity to handle the added sewer flows.**

32. Developer shall conduct inspection of sewer main on Onderdonk Ave. via video to capture conditions of existing manhole and sewer line. Engineer must verify video footage with accompanying report. Provide footage and report to Town. Verify pipe type and condition.

**Response: The sewer line on Onderdonk Avenue is root infested. Mr. Fiacco has this line on the Town's schedule to be cleaned out and repaired as needed.**

33. Developer shall install epoxy coating on existing sanitary manhole prior to connecting.

**Response: Two coats of tar have been called out to be added. The manhole is in good shape.**

34. Add meter pit at property line near Columbia Turnpike, include backflow prevention callout on meter pit.
**Response: Per the DPW, this meter pit is no longer needed.**
35. Revise stop bar call-out to match the 18" width shown on the detail.
**Response: This has been revised.**
36. Add location of sign if one is proposed.
**Response: A sign has been added.**
37. Provide call outs at each water crossing of other utilities to show utility elevations.
**Response: Call outs have been added.**

38. Remove one of the conflicting water service call outs. They specify 6" and 8" mains.
**Response: This has been corrected.**
39. Provide an Engineer's Letter Report for the proposed Sanitary Pump Station.
**Response: Calculations from Environment One have been added.**
40. Town suggests using 6" tapping sleeve into existing fire hydrant along Columbia Turnpike.
**Response: The exact route and connection point of the water line is still being worked on.**
41. Provide flow and pressure data for the water system at the project location to confirm sufficient flow/pressure for the proposed hydrant and building sprinkler system.
**Response: Flow data has been attached. There is 94 psi of static pressure at the highway.**
42. Update access easement(s) if/as needed. Provide copies of easement(s) to Town.
**Response: The access easement has bene updated.**
43. Provide dumpster enclosure location and details or alternative means for dealing with solid waste collection.
**Response: The church currently operates without a dumpster and stated that they do not need one at this location.**

C020 – Grading, Drainage & Erosion Control Plan

44. The label for the 48 lf 18" HDPE storm sewer at the entrance is pointing to two locations. Is a driveway culvert proposed in the location of the second leader? Move this callout to avoid underlying text.
**Response: This call out has been corrected.**
45. Adjust the silt fence along the infiltration basin near the entrance. It should run along a contour.
**Response: this has been corrected.**
46. Provide spot elevations along the sidewalk at the ADA accessible spaces to show compliance with maximum slopes. Indicate if the sidewalk is flush with the pavement.
**Response: elevation call outs have been provided. The sidewalk is flush with pavement.**

47. Eliminate the silt fence at the south end of the project near Onderdonk Estates and the section that crosses the infiltration trench on east side of the overflow lot is not required.
**Response: This silt fence has been removed.**
48. If the infiltration swales are proposed to be constructed at the same time as the rest of the site grading, then add silt fence along all of these features in addition to the silt fence locations currently shown to protect them from sedimentation.
**Response: The silt fence has been added.**
49. Add roof leader locations.
**Response: Roof leader call out and coordination have been added to this sheet and sheet C025.**
50. Shift the proposed water service away from the infiltration swale sump.
**Response: the water service has been shifted.**
51. Clarify the grey box symbols at the flared end section locations and at the edge of the stabilized construction entrance.
**Response: These symbols have been called out. They represent rip rap and a site light pole.**
52. Identify and label the Limit of Disturbance including total area.
**Response: This has been labelled. The total disturbance is approx. 3.5 acres.**
53. Pipes entering NYSDOT catch basin appear to be in conflict. Verify entry angles can be accommodated.
**Response: We have realigned the site storm sewers and now only have one pipe entering the DOT basin.**
54. The outlet structure and culvert for the basin behind the building is missing rim, invert and size information.
**Response: This information has been added.**
55. Clarify proposed practice 'infiltration basin' is listed on NOI.
**Response: This has been added.**

C031 – Plan and Profile

56. Confirm water service line size matches Utility Plan.
**Response: This has been corrected.**

C040 – NYSDOT Curb Cut Plan

57. NYSDOT will need to review and approve this sheet in accordance with the NYSDOT commercial driveway permit process.
**Response: We are in contact with DOT.**
58. Additional spot elevations should be provided at the connection of the entrance drive to the street to assure positive drainage to the existing adjacent catch basins.
**Response: Spot elevations and flow arrows have been added.**
59. Show proposed storm connections to be performed in the NYSDOT R.O.W.
**Response: Storm connections are now shown in the DOT ROW**

C050 – C052 – Site Details

60. Two heavy duty asphalt pavement section details are provided. One should be changed to a standard duty pavement section and the limits of the two types of pavement should be shown on the Site Plan.
**Response: The heavy duty detail has been removed.**
61. Provide a concrete sidewalk detail.
**Response: a concrete sidewalk detail has been added.**
62. Update the sign table to reflect signs proposed for the project including handicap space and accessible space signs.
**Response: The sign table has been updated.**
63. Provide a detail for the church's sign if one is proposed.
**Response: a detail has been provided.**
64. Provide typical cross section details for the infiltration swales and basins.
**Response: typical cross sections have been provided. See sheet C025.**
65. Add tracer wire per Town standards for plastic laterals with access point details
**Response: Tracer wire has been added.**
66. C050 and C052 have duplicated site details, remove.
**Response: Duplicated details have been removed.**
67. Add detail or note indicating that storm sewer catch basin grates must be supplied with MS4 markings, e.g. 'dump no waster- drains to river' or similar, subject to Town MS4 approval.
**Response: this note will be added.**

The following plans are not currently included in the plan set and are required:

Landscape Plan

68. Prepare a Landscape Plan. Include the following components:
a. Internal parking lot landscaping – include calculations for minimum number of trees and internal landscaping coverage percentage
b. Provide perimeter landscaping in compliance with Section 3.2.2 and Table III-A. Special attention should be paid to perimeter landscaping to break views to residential lots Susko and Stanford located on the south side of the project along Onderdonk Ave.
**Response: a landscape plan is attached which addresses the comments above. See sheet C014.**

Lighting Photometric Plan

69. Prepare a Lighting Photometric Plan and provide light fixture details. We recommend the use of Dark Sky compliant fixtures, at minimum the Town requires no

exposed bulbs will be readily visible from the public way or adjacent parcels, see Town Comprehensive Zoning Law Section 3.2.6.
**Response: A lighting plan is now part of the plan set. See sheet C012.**

SWPPP
70. A certification letter should be provided by the design engineer and sent to the Town at the completion of the project indicating that the construction work was performed as per the construction plans, compliance with all permit requirements, and as per the approved SWPPP.
**Response: Agreed**.
71. A maintenance agreement between the applicant and the Town should be established before completion of the project to ensure that stormwater practices are functioning as designed per NYSDEC requirements. The Town has provided template maintenance agreement as Appendix 1.
**Response: this document will be completed.**
72. Add the following to Section 2.5.3: Stormwater inspection reports as prepared by the Operator's Qualified Inspector should be provided to the Town of East Greenbush MS4 Stormwater Management Officer to ensure compliance with the Construction General Permit.
**Response: This has been added.**
73. The project property is located in an archeo-sensitive zone according to the SWPPP narrative and figures. A Phase I Archaeological Survey is required according to the SWPPP. Final determination by SHPPO should be included in Appendix G once received.
**Response: SHPO has been contacted and we are awaiting final sign off from them.**
74. Provide hydrograph plots with the HydroCAD summaries provided in Appendix I and J.
**Response: this information has been provided.**
75. Provide pre-treatment calculations to support the summary in Table 3 in Section 6.3. Clarify the water quality treatment calculations within Appendix K. The proposed water quality volume provided calculations should be included for each feature. Provide the stage-storage tables from HydroCAD for these features.
**Response: This information has been provided.**
76. Dente Soils Report in Appendix G is missing.
**Response: Reference to the soils was incorrect. We did the soils testing in house.**
77. Soil testing for the storm practices should be provided per NYSDEC Stormwater Design Manual Appendix D.
**Response: This information has been provided.**
78. Update the appendix id's. A few letters are skipped in the TOC and within the appendices.
**Response: This information has been provided**.

We trust the above narrative, attached plans and SWPPP adequately address your concerns. Should you have any questions or require additional information please feel free to contact us.

Very truly yours,
***Hart Engineering,***

Steven P. Hart, PE

Mr. Troy Wojeicsky, PE – Review Engineer Stantech
File: immanuelchurchpb22-2
Pastor Brad Guenther, applicant

Immanuel Church

Love + Community + Truth

1955 Ferndale Road
Castleton, NY 12033
518-283-2715
info@immanuel-ny.com
**Immanuel-ny.com**

June 16, 2022

Re: Traffic Flow

To Whom It May Concern:

Our weekday traffic flow during the 7-9 am and 4-6 pm time blocks would be 2-4 cars maximum, representing staff primarily, as we neither have nor anticipate any activities during those times. At present, daytime groups meet from 9-11 am on Monday and from 10:45-12:15 on Tuesday. Evening events begin at 6:30 pm and meet most weeknights (presently all weeknights except Thursday). These events would average 5-20 cars.

Thank you for serving us and our community.

In Grace,

Brad Guenther, Pastor

518-336-5154

Environment One Corporation

# Pressure Sewer Preliminary Cost and Design Analysis For Immanuel Church, NY

**Prepared For:**
**Hart Engineering**
**1969 Ferndale Road**
**Castleton NY 12033 USA**
**Tel: 518-479-4014**
**Fax:**
**Prepared By: M. Crowley**
**June 14, 2022**

# Immanuel Church, NY

**Prepared by :** M. Crowley **On:** June 14, 2022

**Notes :**
Analysis based upon drawings and data provided. Station recommendations are preliminary.

GPD values impact retention times only, not line sizing or hydraulics. GP laterals to be 1.25".

Analysis valid only with pipe type listed.

General recommendations for valve placement are: clean out valves at intervals of approximately 1,000 ft and at branch ends and junctions; isolation valves at branch junctions; and air release valves at changes in grade of 20 to 25 ft or more and/or at intervals of 2,000 to 2,500 ft. Lateral kits comprised of a ball and check valve are required to be installed between the pump discharge and street main on all installations. Laterals should be located as close to the public right of way as possible.

Quantities of grinder pumps, pipe, and valves are indicated on the cost page. The model of grinder pump(s) indicated is based upon the initial information provided to us but may not be the most appropriate for the specific location or requirements of the project. Costs of these items and their installation are best obtained from sources in your region. We recommend you contact your local distributor of Environment One products for additional recommendations.

**<<<<< E N D O F N O T E S >>>>>**

June 14, 2022

# Budgetary Low Pressure Sewer System Costs

## Immanuel Church, NY

| | Quantity | Description | Unit Cost | Installation | Sub Total |
|---|---|---|---|---|---|
| **Pumps** | 1 | WH472-92 | $0.00 | 0.00 | $0.00 |
| | 1 | Lateral Kits (Includes Ball\Check Valve Assembly) | $0.00 | 0.00 | $0.00 |
| | 1 | Lateral (Boundary) Installation | $0.00 | 0.00 | $0.00 |
| | 1 | Pump/Panel Installation | $0.00 | 0.00 | $0.00 |
| | | | | | **$0.00** |
| **Piping** | 184 | 1.25" Pipe | $0.00 | 0.00 | $0.00 |
| | | | | | **$0.00** |

| | | | |
|---|---|---|---|
| **Number of Connections** | **1** | | |
| **Total Per Connection** | **$0.00** | **Total (w/o other)** >>>>>>>>>>>>> | **$0.00** |
| **Grand Total Per Connection** | **$0.00** | **Grand Total (including other)** >>>>>>>>>>>>> | **$0.00** |

Note: The System Costs above are based on piping sized for, and Grinder Pumps manufactured by Environment One Corporation.

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS

Immanuel Church, NY

Prepared By:
M. Crowley

June 14, 2022

| Zone Number | Connects to Zone | Number of Pumps in Zone | Accum Pumps in Zone | Gals/day per Pump | Max Flow Per Pump (gpm) | Max Sim Ops | Max Flow (GPM) | Pipe Size (inches) | Max Velocity (FPS) | Length of Main this Zone | Friction Loss Factor (ft/100 ft) | Friction Loss This Zone | Accum Fric Loss (feet) | Max Main Elevation | Minimum Pump Elevation | Static Head (feet) | Total Dynamic Head (ft) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| This spreadsheet was calculated using pipe diameters for: SDR11HDPE | | | | | | | | | | | Friction loss calculations were based on a Constant for inside roughness "C" of: 150 | | | | | | |
| 1.00 | 1.00 | 1 | 1 | 600 | 11.00 | 1 | 11.00 | 1.25 | 2.44 | 184.00 | 1.88 | 3.46 | 3.46 | 281.00 | 271.00 | 10.00 | 13.46 |



Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One.

Y:\SSB\SSB Engineering Data\AE Projects\Immanuel Church, NY\Immanuel Church, NY.EOne

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME(HR)

Prepared By:
M. Crowley

Immanuel Church, NY

June 14, 2022

| Zone Number | Connects to Zone | Accumulated Total of Pumps this Zone | Pipe Size (inches) | Gallons per 100 lineal feet | Length of Zone | Capacity of Zone | Average Daily Flow | Average Fluid Changes per Day | Average Retention Time (Hr) | Accumulated Retention Time (Hr) |
|---|---|---|---|---|---|---|---|---|---|---|
| This spreadsheet was calculated using pipe diameters for: SDR11HDPE | | | | | | | | Gals per Day per Dwelling | | 200 |
| 1.00 | 1.00 | 1 | 1.25 | 7.52 | 184.00 | 13.84 | 600 | 43.35 | 0.55 | 0.55 |



Note: This analysis is valid only with the use of progressive cavity type grinder pumps as manufactured by Environment One

# RBM GUARDIAN FIRE PROTECTION, INC.

8 Enterprise Drive Albany, New York 12204 P # 518-463-4340 F# 518-463-4378

Email: rbm@rbmguardian.com


## FLOW TEST SUMMARY SHEET FOR HYDRANT TESTING

DATE: June 9, 2022
TO: Hart Engineering
ATTN: Steven Hart
FROM: Matthew Wilms
JOB NAME/LOCATION: Columbia Turnpike near Onderdonk Avenue
East Greenbush, New York

Please find the results of the Hydrant Flow Tests that were conducted by RBM Guardian Fire Protection, Inc., and Town of East Greenbush Water Department:

Date of Flow: June 9, 2022
Street Names(s): Onderdonk Road (Routes 9 & 20)

| | | |
|---|---|---|
| Static | 94 | PSI |
| Residual | 80 | PSI |
| GPM | 924 | PSI |
| 2 ½" Hosemonster | 30 | pitot |

Remarks:
Gauged and Flowed Hydrants at Cemetary

If you have any questions, please do not hesitate to call me.