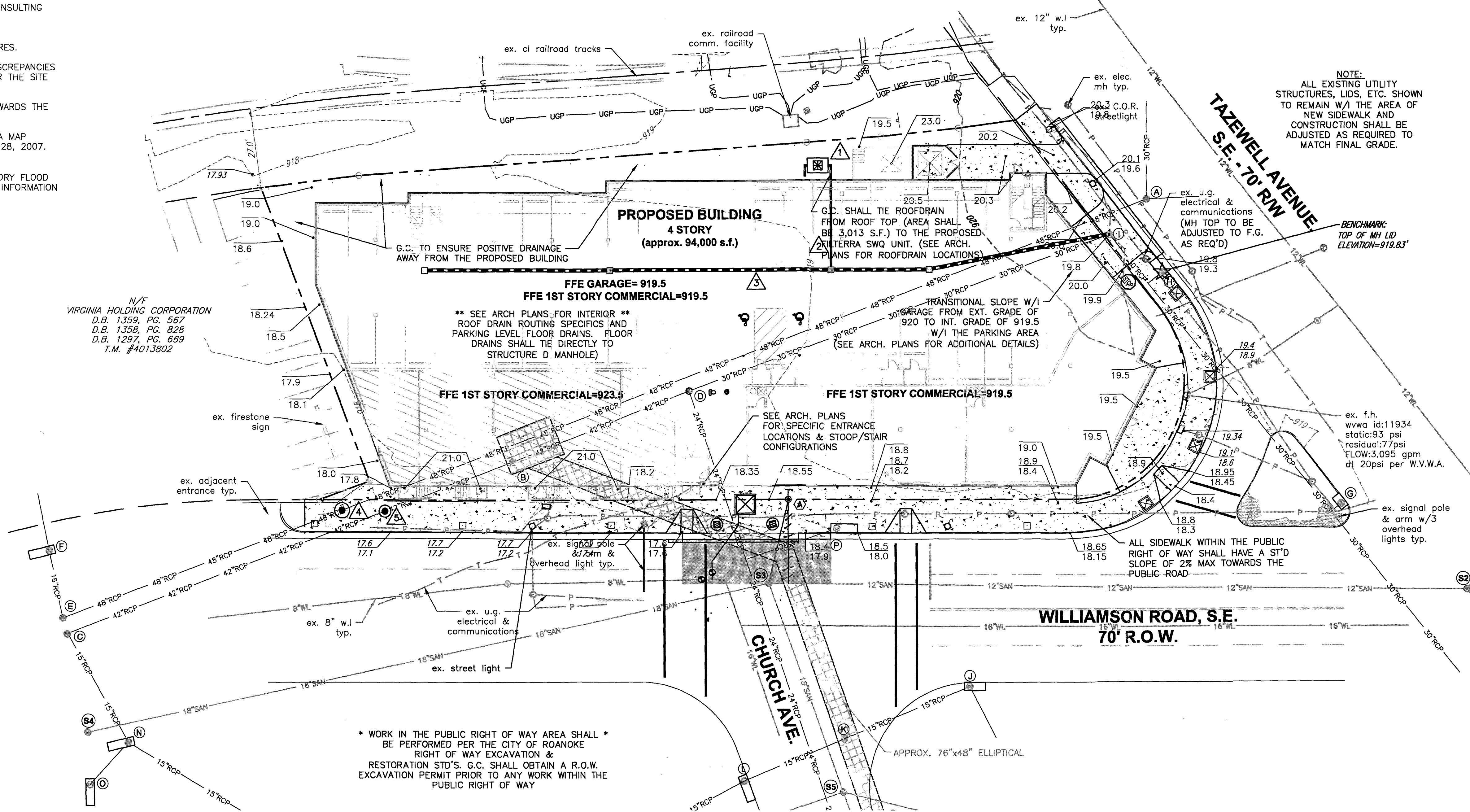


SITE GRADING NOTES:

1. NO CONSTRUCTION/FIELD CHANGES WITHOUT THE APPROVAL OF THE CONSULTING ENGINEER AND CITY OF ROANOKE PLANNING, BUILDING, AND DEVELOPMENT DEPARTMENT.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
3. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES WITH EXISTING UTILITIES ARE LOCATED DURING THE GRADING PROCESS FOR THE SITE PRIOR TO PROCEEDING WITH ANY FURTHER WORK.
4. PROPOSED CONCRETE SIDEWALKS SHALL HAVE A 2% CROSS SLOPE TOWARDS THE PUBLIC ROADWAYS AND AWAY FROM THE PROPOSED BUILDING.
5. PROPERTY IS LOCATED WITHIN THE AE FLOODZONE AS SHOWN ON FEMA MAP 51161C0164G & 51161C0168G WITH MAP REVISION DATE OF SEPTEMBER 28, 2007. EXISTING FLOODPLAIN ELEVATION 921'.
6. THE GROUND FLOOR COMMERCIAL SECTION OF THE BUILDING WILL BE DRY FLOOD PROOFED. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ADDITIONAL INFORMATION ON SPECIFICS RELATED TO THIS CONSTRUCTION.



SANITARY SEWER: STRUCTURE SCHEDULE:

- (A) S.S. MH (TRAFFIC BEARING)
TOP=918.55
INV. IN=912.92
INV. OUT=912.82
- (A) ex. main
30 LF OF 8" SDR-35 PVC @ 2.08%
(INV. OUT TO MAIN - 912.20)

NOTES:

1. ALL SANITARY SEWER PIPE SHALL BE SDR-35 PVC PIPE UNLESS OTHERWISE SPECIFIED.
2. 6" S.S. LATERALS SHALL BE CONSTRUCTED AT MINIMUM 1.04% SLOPE PER THE BUILDING CODE.

STORM SEWER SCHEDULE:

1. 4'x6' ROOF DRAIN FILTERRA (DRAINAGE AREA:0.07 AC.)
TOP=919.5
INV. IN=918.17
INV. OUT=915.42
2. 36 LF OF 6" SCH-40 PVC AT 1.17%
INV. OUT=915.00 INTO GRATE INLET
3. UNDERGROUND ROOF LEADER TRUNK LINE
232 LF OF 12" SCH-40 PVC AT 1.25%
INV. IN=916.7
INV. OUT=913.8 INTO EX. MH STR. I
4. E.J.I.W. 12" CAST IRON GRATE (ALL TOPS SHALL BE H2O LOADING MIN.)
TOP (4): 919.2 - (A.D.A. COMPLIANT)
(4): 12" SCH. 40 RISER STRUCTURE
5. VDOT ST'D MH-2 MANHOLE (5' DIA.)
TOP=917.7
INV. IN/OUT=907.72
6. VDOT ST'D MH-2 MANHOLE
TOP=917.7
INV. IN/OUT=907.92

EXISTING SANITARY SEWER STRUCTURE SCHEDULE:

1. ex. sanitary sewer mh.
TOP=919.10'
INV.=914.5' (per vwwa)
2. ex. sanitary sewer mh.
TOP=919.50'
INV.=913.5' (per vwwa)
3. ex. sanitary sewer mh.
TOP=918.51'
N INV. IN=911.53'
S INV. IN=911.71'
S INV. IN=912.13'
SHELF=912.56'
4. ex. sanitary sewer mh
TOP=917.33'
W INV. IN=911.18'
S INV. IN=910.68'
N INV. OUT=910.41'
5. ex. sanitary sewer mh
TOP=917.96'
S INV. IN=913.1'
N INV. OUT=912.2'
6. ex. STORM MANHOLE
ex. top= not accessible
CL INV.=909.63' (from records)
7. ex. storm junction box
ex top=918.12'
NEW TOP=919.50'
(LID TO BE REPLACED W/WATER TIGHT BOLTED MH FRAME & COVER)
48" INV.=907.92'
42" INV.=907.92'
ELLIPTICAL IN=NOT ACCESSIBLE
8. ex. STORM MANHOLE
(approx. location - paved over)
ex. top= not accessible
INV. IN=911.44' (15" RCP)
CL INV.=907.38' (from records)
9. ex. storm manhole
ex. top=918.67'
NEW TOP=919.50'
(LID TO BE REPLACED W/WATER TIGHT BOLTED MH FRAME & COVER)
30" INV. IN=908.12'
42" INV. OUT=908.12'
10. ex. STORM MANHOLE
(approx. location - paved over)
ex. top=not accessible
INV. IN=912.14' (15" RCP)
CL INV.=907.41' (from records)

EXISTING STORM SEWER STRUCTURE SCHEDULE:

1. ex. di-3b curb inlet (8' throat)
TOP=917.08'
INV. IN=912.40'
INV. OUT=912.38'
2. ex. di-3a curb inlet
TOP=919.25'
INV. OUT=910.85'
3. ex. di-3b curb inlet (6' throat)
TOP=919.83'
INV. OUT=910.63'
4. ex. storm mh
ex. top=920'
NEW TOP=919.7'
30" INV. IN=909.25'
30" INV. OUT=909.2'
NEW 12" INV. IN=913.8
5. ex. di-3b curb inlet (6' throat)
TOP=918.61'
INV. IN=913.16'
INV. OUT=913.06'
6. ex. storm mh
TOP=918.19'
N INV. IN=913.39'
CL INV. =908.79'
7. ex. di-3b curb inlet (8' throat)
TOP=917.74'
INV. IN=913.69'
INV. OUT=908.64'
8. ex. STORM MANHOLE
(approx. location - paved over)
9. ex. di-3b curb inlet (8' throat)
TOP=917.62'
W. INV.=913.00'
E. INV.=912.84'
N. INV.=912.85'
10. ex. di-3b curb inlet (8' throat)
TOP=917.66'
INV.=913.09'
11. ex. di-3b curb inlet (8' throat)
TOP=918.50'
INV.=914.80'
12. ex. di-3b curb inlet (8' throat)
TOP=917.95'
INV.=909.15'

GENERAL GRADING NOTES

1. G.C. SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND REFER TO BUILDING PLANS FOR SUBGRADE AND UTILITY TRENCHES WITHIN 5' OF THE BUILDING ENVELOPE.
2. REMOVE TREES, SHRUBS, GRASS, AND OTHER VEGETATION. IMPROVEMENTS OR OBSTRUCTIONS AS REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION. REMOVE TREES AND OTHER VEGETATION, INCLUDING STUMPS AND ROOTS, COMPLETELY IN AREAS REQUIRED FOR SUBSEQUENT SEEDING. CUT OFF TREES AND STUMPS IN AREAS TO RECEIVE FILL MORE THAN THREE FEET IN DEPTH TO WITHIN EIGHT INCHES OF THE ORIGINAL GROUND SURFACE.
3. BARRICADE OPEN EXCAVATIONS OCCURRING AS PART OF THIS WORK AND OPERATE WARNING LIGHTS AS RECOMMENDED BY AUTHORITIES HAVING JURISDICTION.
4. EXCAVATION FOR STRUCTURES:
 - a. CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITHIN A TOLERANCE OF 0.1'
 - b. PROVIDE TRUE AND STRAIGHT FOOTING EXCAVATIONS WITH UNIFORM AND LEVEL BOTTOMS OF THE WIDTH INDICATED TO ENSURE PROPER PLACEMENT AND COVER OF ALL REINFORCEMENT.
 - c. REMOVE LOOSE MATERIALS FROM THE EXCAVATION PRIOR TO PLACEMENT OF CONCRETE.
 - d. FOOTINGS WHICH SUPPORT CONCRETE MASONRY UNITS MAY BE STEPPED PROVIDED THE VERTICAL STEP DOES NOT EXCEED ONE HALF OF THE HORIZONTAL DISTANCE BETWEEN STEPS AND HORIZONTAL DISTANCE BETWEEN STEPS IS NOT LESS THAN TWO FEET.
 - e. IF ROCK IS ENCOUNTERED IN A FOOTING EXCAVATION, UNDERCUT IT A MINIMUM EXCAVATION WITH CONTROLLED FILL.
5. CUT SURFACE UNDER PAVEMENTS TO COMPLY WITH CROSS SECTIONS, ELEVATIONS, AND GRADES AS INDICATED.
6. EXCAVATE TRENCHES TO UNIFORM WIDTH CONFORMING TO VDOT STANDARD PB-1 FOR STORM DRAINAGE PIPING.
7. PREVENT SURFACE WATER AND SUBSURFACE OR GROUND WATER FROM FLOWING INTO EXCAVATIONS AND FROM FLOODING PROJECT SITE AND SURROUNDING AREA. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. CONVEY WATER WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°C).
8. PROTECT EXCAVATED BOTTOMS OF ALL FOOTINGS AND TRENCHES AGAINST FREEZING WHEN ATMOSPHERIC TEMPERATURE IS LESS THEN 35°F (1°C).
9. BACKFILLING SHALL BE A SUITABLE MATERIAL THAT IS CAPABLE ACHIEVING THE REQUIRED COMPACTIONS INDICATED ON THE DETAILS PAGE.
10. FINISH LAWN AREAS TO WITHIN ONE INCH ABOVE OR BELOW REQUIRED SUBGRADE ELEVATIONS. SHAPE SURFACE UNDER WALKS AND PAVEMENTS TO LINE, GRADE, AND CROSS SECTION, WITH NOT MORE THAN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE ELEVATION.
11. GRADE SURFACE UNDER BUILDING SLABS SMOOTH AND EVEN, FREE OF VOIDS. PROVIDE FINAL GRADES WITHIN 1/2" OF THOSE INDICATED WHEN TESTED WITH A 10' STRAIGHT EDGE.
12. PROTECT GRADED AREAS FROM TRAFFIC AND EROSION. REPAIR AREAS WHICH HAVE SETTLED, ERODED, OR BECOME DAMAGED DUE TO CONSTRUCTION ACTIVITIES AT NO ADDITIONAL COST TO OWNER.
13. PREPARE AREA FOR SEEDING BY SPREADING TOPSOIL TO A DEPTH OF 4" OVER ALL DISTURBED AREAS NOT RECEIVING WALKS, PAVEMENT, WALLS OR BUILDING, INCLUDING TRENCHES. IMMEDIATELY FOLLOWING PLACEMENT OF TOPSOIL, DISK THE ENTIRE TOPSOILED AREA AND RAKE FREE OF STONES AND DEBRIS OVER 1/2" IN ANY DIMENSION. PROVIDE A FINISHED SURFACE FREE OF DEPRESSIONS OR HIGH SPOTS.