June 27, 2023

Attn: Greg Fedner, P.E.

City of Columbus, Department of Public Utilities
910 Dublin Road

Columbus, Ohio 43215

Subject: Type II Variance for Columbus Works Commerce Center (CWCC)

Project Overview

The Columbus Works Commerce Center project consists of five (5) separate developments on five (5) parcels (parcels A-E) that are to be split from an existing 77-acre parcel located at 6200 E. Broad Street (See Appendix A for overall site layout). The existing parcel is the former location of the Lucent Industries industrial manufacturing complex.

Parcels A & E are noted as future development areas. Parcel B is to contain a residential apartment development and parcels C & D will contain industrial warehouse developments. In addition, the City of Columbus is proposing to construct two (2) public roadways through the proposed developments, including the extension of Westbourne Avenue (east-west) and the proposed Corrina Drive (north-south). In the future, the City of Columbus plans to extend Corrina Drive to the south to connect with East Broad Street.

As a part of the development, five (5) separate extended wet detention basins are being proposed (Basins A-E), to treat and detain runoff from the project. In addition to the proposed and future private developments, Basins A, D, and E are to treat and detain the runoff from the proposed public roadway improvements. See Appendix A, Post-Developed Tributary Area Map, for details on the tributary areas for each proposed basin.

Standard - City of Columbus Stormwater Drainage Manual (SWDM), Dated December 2022

- 1. "Peak water surface elevation during the 100-year design event must be 1 foot below the basin embankment elevation and the first-floor elevations of building structures near the basin." (Section 3.4.1 Table 3-3)
- "The major storm routing path shall be designed such that the peak flood stage during the 100year design storm is at least one foot below the first-floor elevation of the building structures within and adjacent to the development." (Section 2.4, 1st paragraph)

Variance Requested

A Type II Variance is being requested to construct two (2) extended wet detention basins, C & D, with 100-year ponding elevations and major flood routing paths above the lower-level finished floor elevation of the adjacent existing office building at 6150 E. Broad Street.

Rationale

The Type II Variance is being requested to construct Basins C & D closer to the existing finished grade of the area than would be required for full compliance of the above standards. As designed, Basins C & D have 100-year ponding elevations of 896.45 and 893.16, respectively. While the first floor of the adjacent existing office building at 6150 E. Broad Street (hereafter noted as the existing office building) is at elevation 883.94, the finished grade along the northern portion of the building adjacent to Basins C & D ranges from 898 to 900, over 1 foot higher than the 100-year ponding elevations and flood routing paths of the basins. The finished floor elevation of the lowest level inhabitable floor along the north face of the existing office building (side adjacent to Basins C & D) ranges from 899.50 to 899.58, also 1 foot higher than 100-year ponding and flood routing path elevations. The nearest entrance with access to the lower-level finished floor elevation at 883.94 is 125 feet south of the northern face of the existing office building, over 185 feet away from the nearest 100-year ponding limits.

Basins C and D are currently placed to maintain the existing flood routing paths of the existing site and to accept flood routing from the proposed Corrina Drive. Currently, a portion of the existing site flood routes through the parking lot on the east side of the existing office building's property. As a result of the basin construction, the flood routing conditions of the site will be improved as it is proposed to re-direct the flood routing away from the existing office building. Any potential overflows from Basins C & D are routed away from the existing office building through the major flood routing paths.

Additionally, it is E.P. Ferris' understanding that the existing office building is currently in contract for redevelopment. The City's plan to extend Corrina Drive to E. Broad Street would require the building to be demolished in the near future. Flood routing is required to continue south to E. Broad Street to follow the existing topography.

Alternatives

Full Compliance

Full compliance with the SWDM would require Basins C & D to be built with 100-year ponding elevations and major flood routing paths at least one (1) foot below the lower-level finished floor of the existing office building (883.94). To achieve this, Basins C and D would need to have normal pool elevations 20.5 feet below the finished grade of the surrounding area. The depth of these basins would require slopes above the top of bank up to 1:1, posing significant safety and constructability concerns. The flood routing out of the basins would be achieved through concrete channels in order to retain the large amount of soil above the path and to maintain a flood routing path below the existing office building's lower-level finished floor elevation. This option is detailed in Appendix B.

Additionally, the groundwater table would be above the normal pool elevation of both basins, rendering the basins ineffective. See Appendix E for information regarding the groundwater elevations of the area.

Minimal Impact

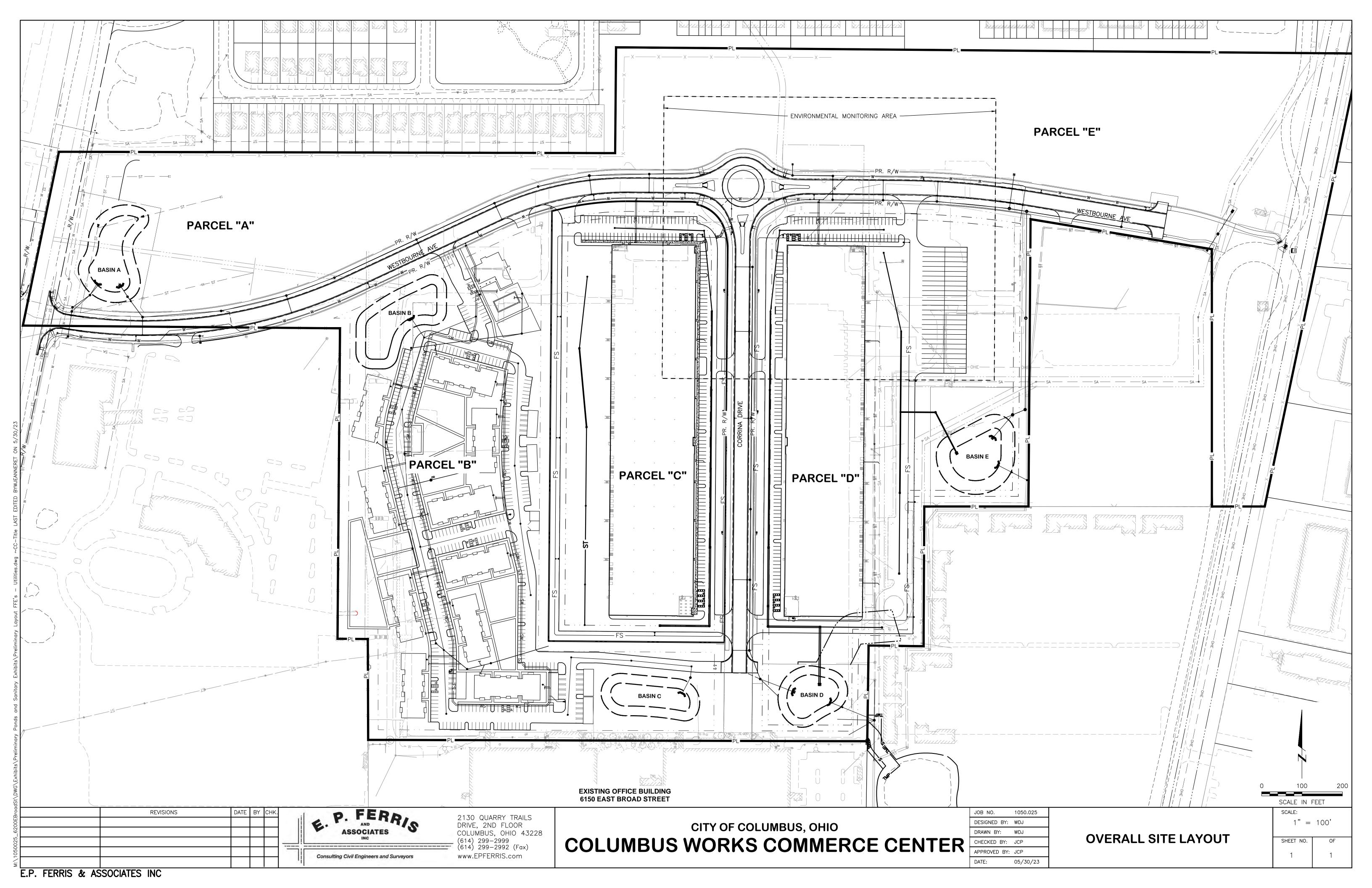
The minimal impact solution will move the proposed basins further away from the adjacent building while maintaining 100-year ponding elevations above the lower-level finished floor of the existing office building. This option would delay plan approval and as such, the construction of the public roads. Because this option still does not satisfy the requirements of the SWDM, it is not a preferred solution. The minimal

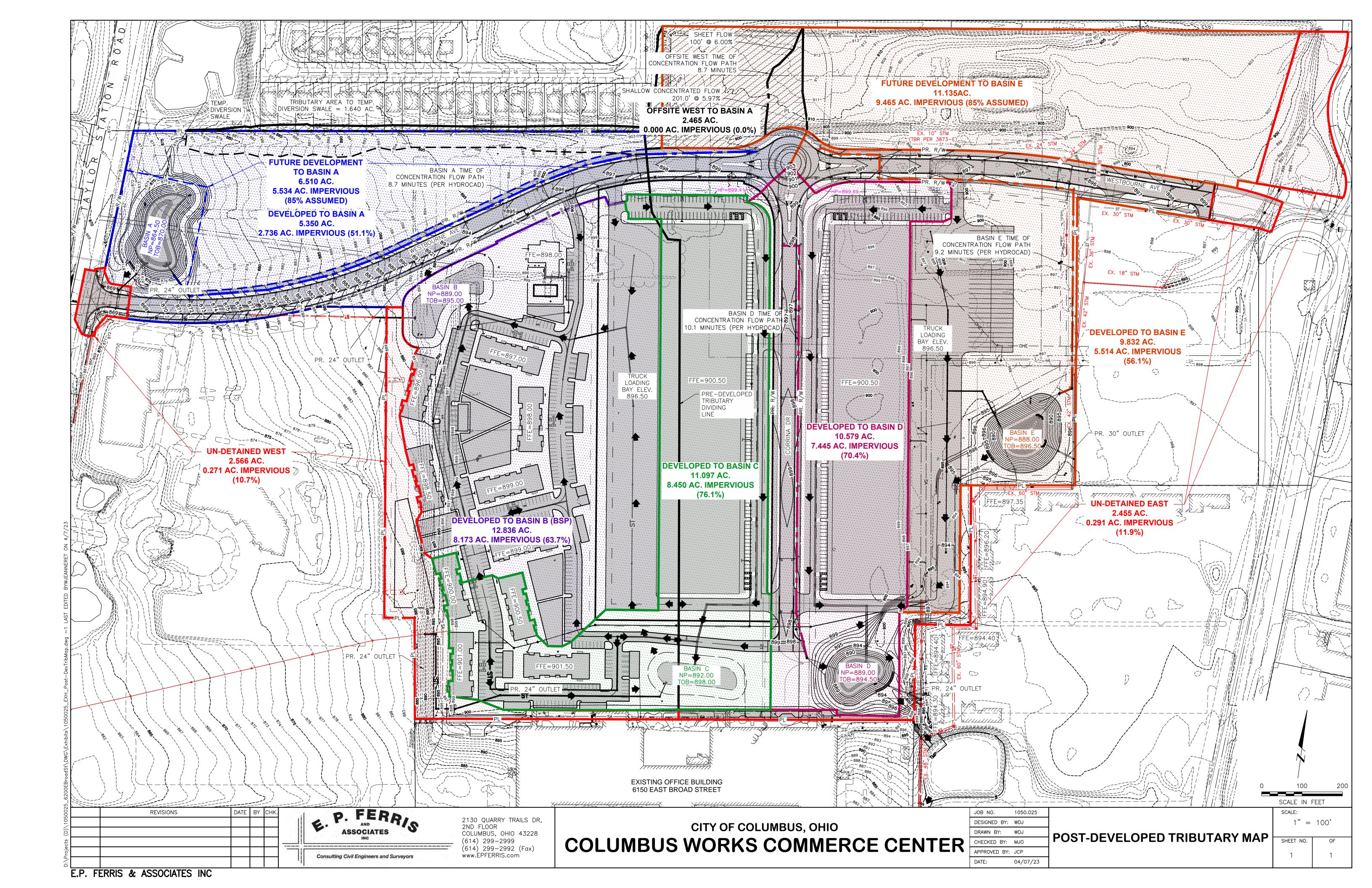
Preferred

The preferred option is to move forward with the designs shown in Appendix D. The full compliance option would negate the efficacy of the basins, and the minimal impact option would delay construction of the public roadways without satisfying the requirements of the SWDM. The preferred option maintains a 100-year ponding elevation and major flood routing path one (1) foot below the finished grade and the access points along the northern face of the existing office building adjacent to Basins C & D. This, coupled with the understanding that the existing office building is in contract for re-development/demolition, brings E.P. Ferris to conclude the existing office building is sufficiently protected by the existing grade from Basins C & D's 100-year flood routing paths.

Appendix A

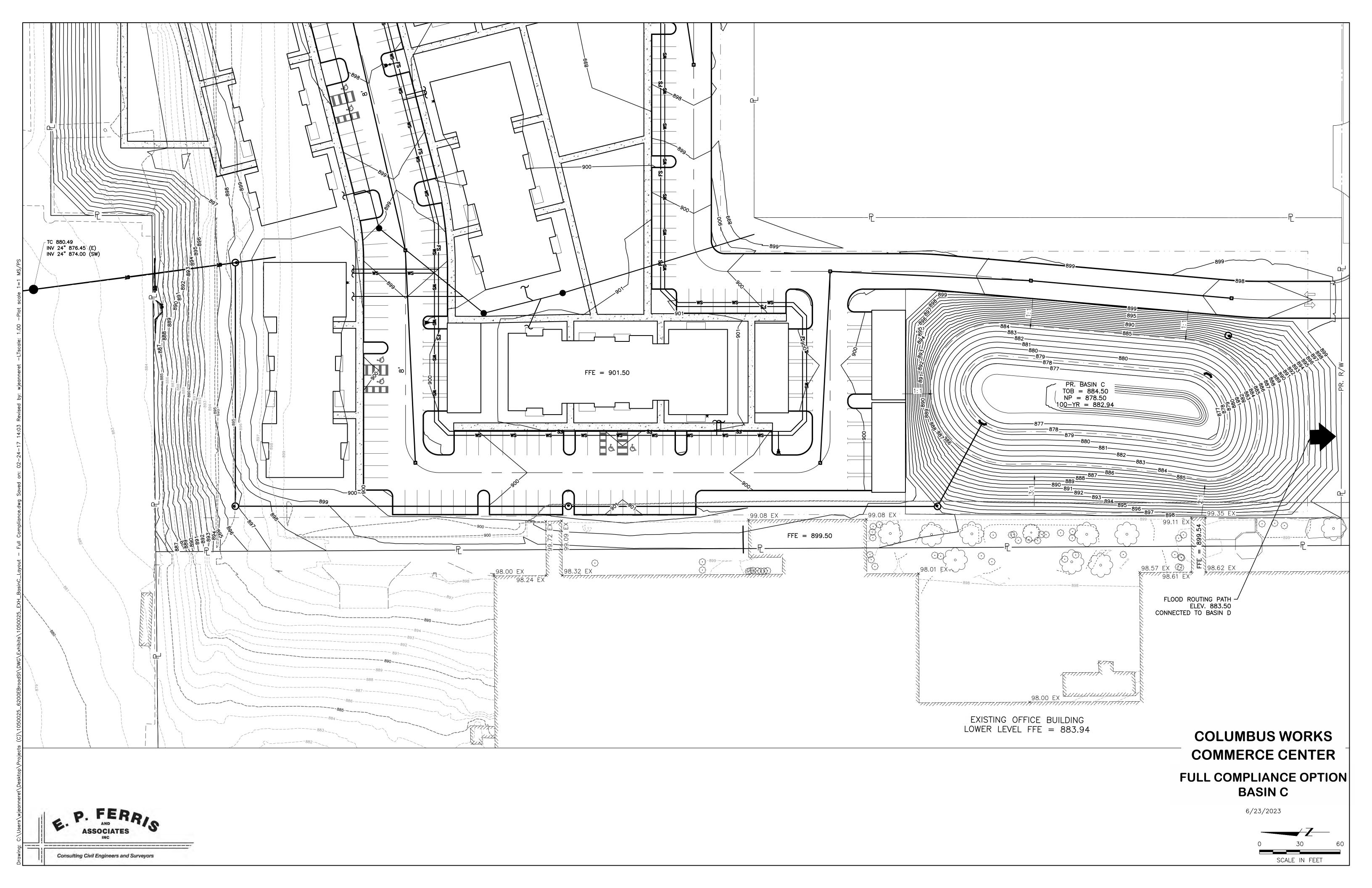
(Overall Site Layout & Post-Developed Tributary Area Map)

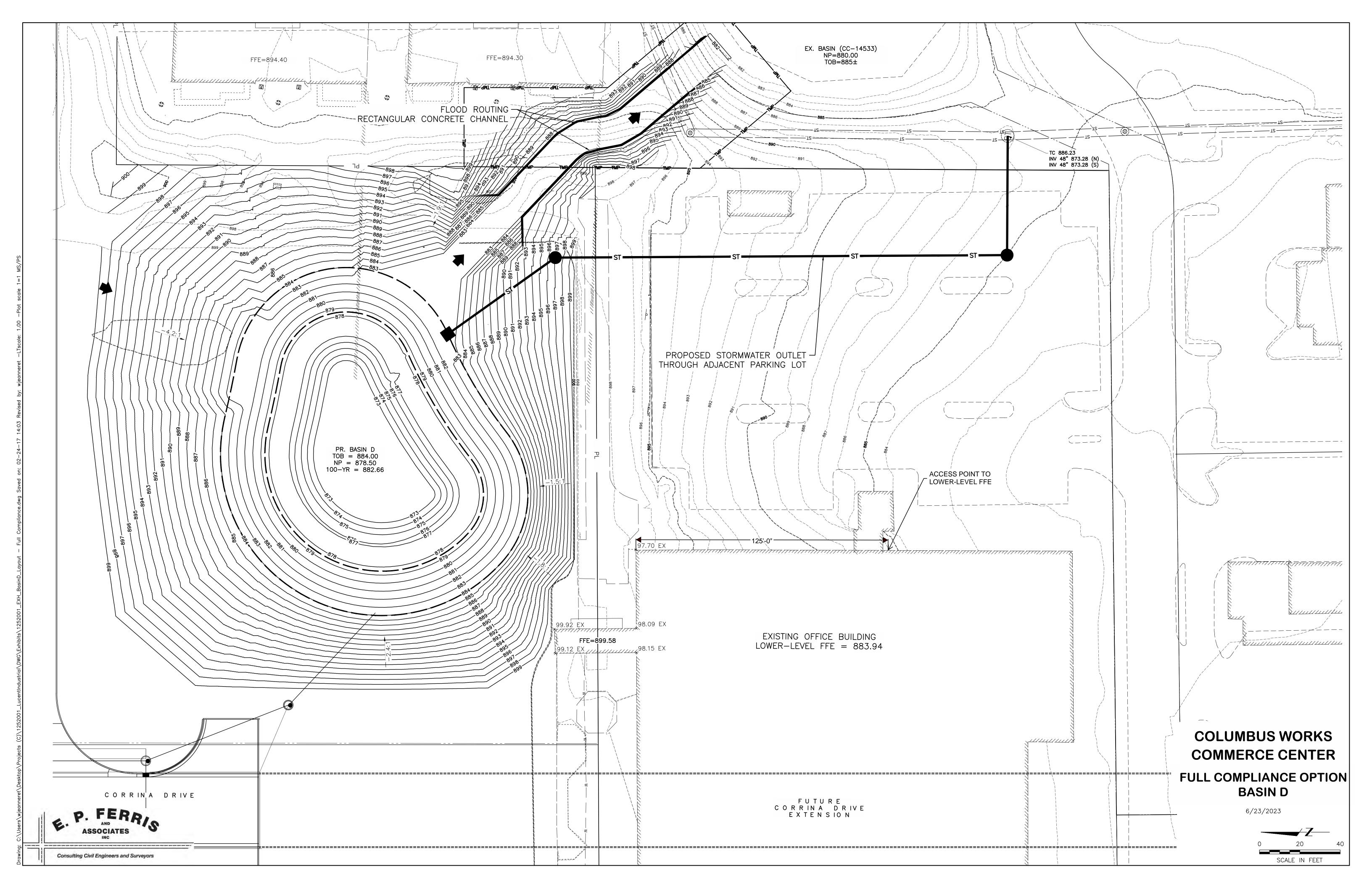




Appendix B

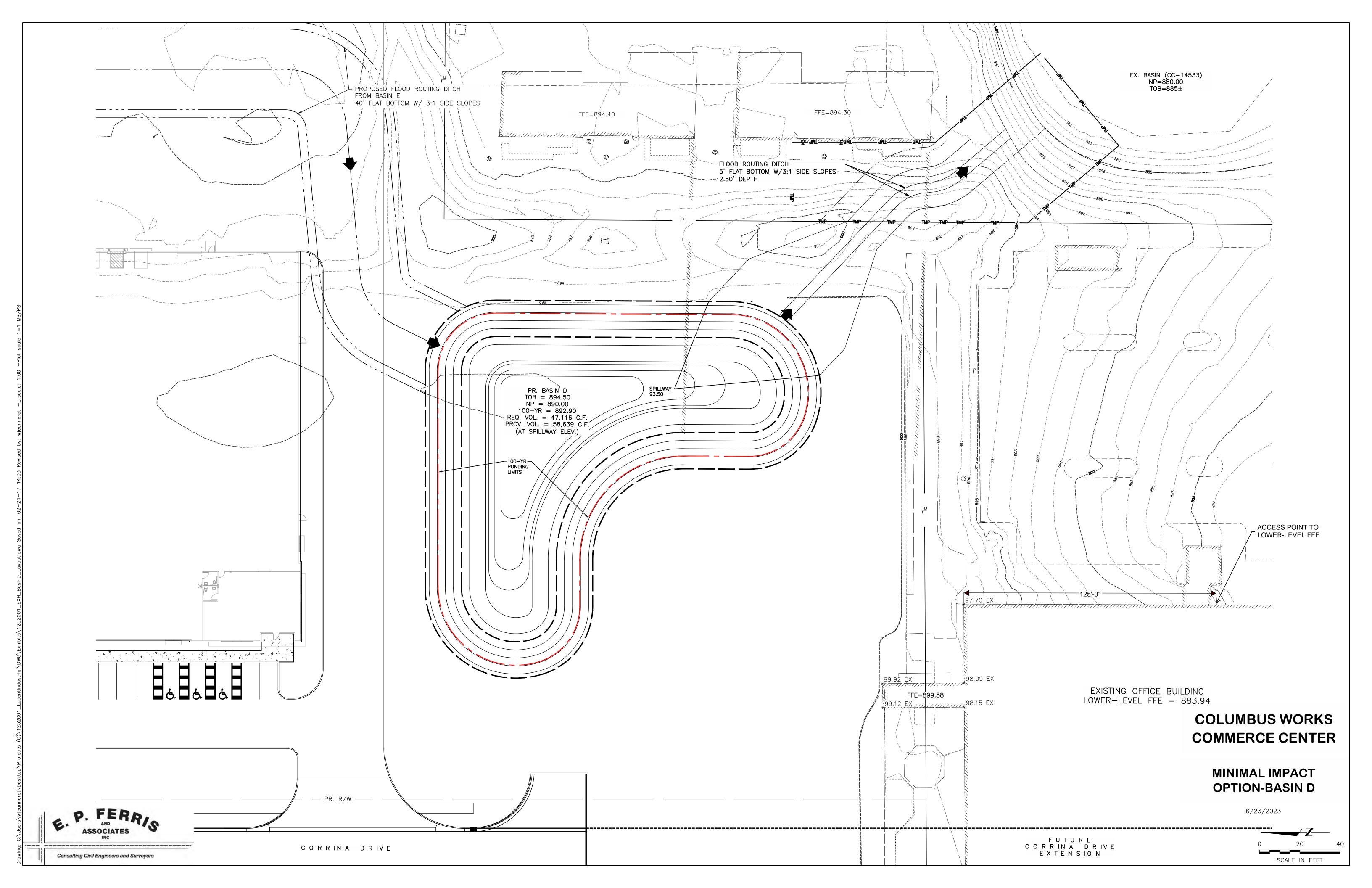
(Full Compliance Option)





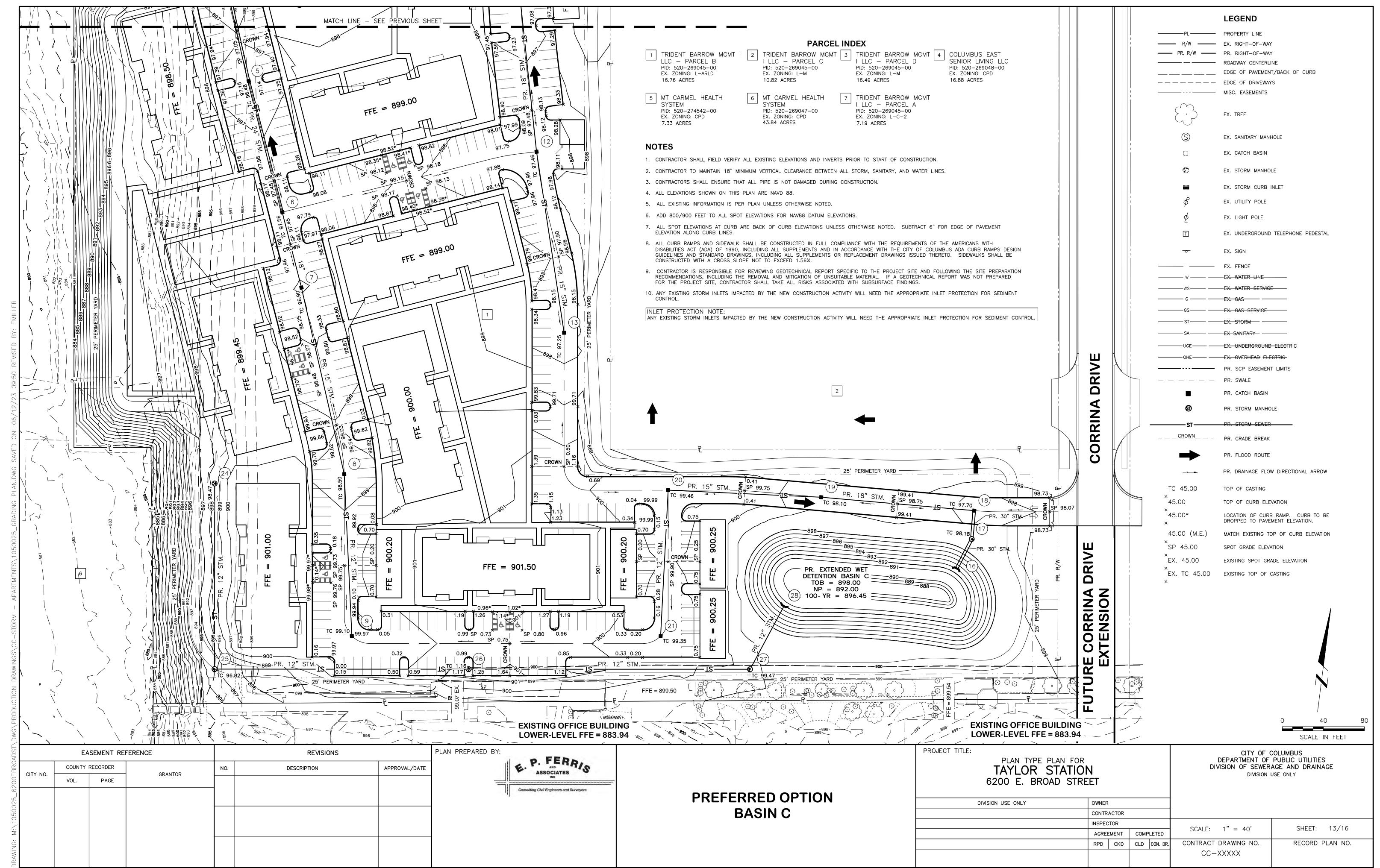
Appendix C

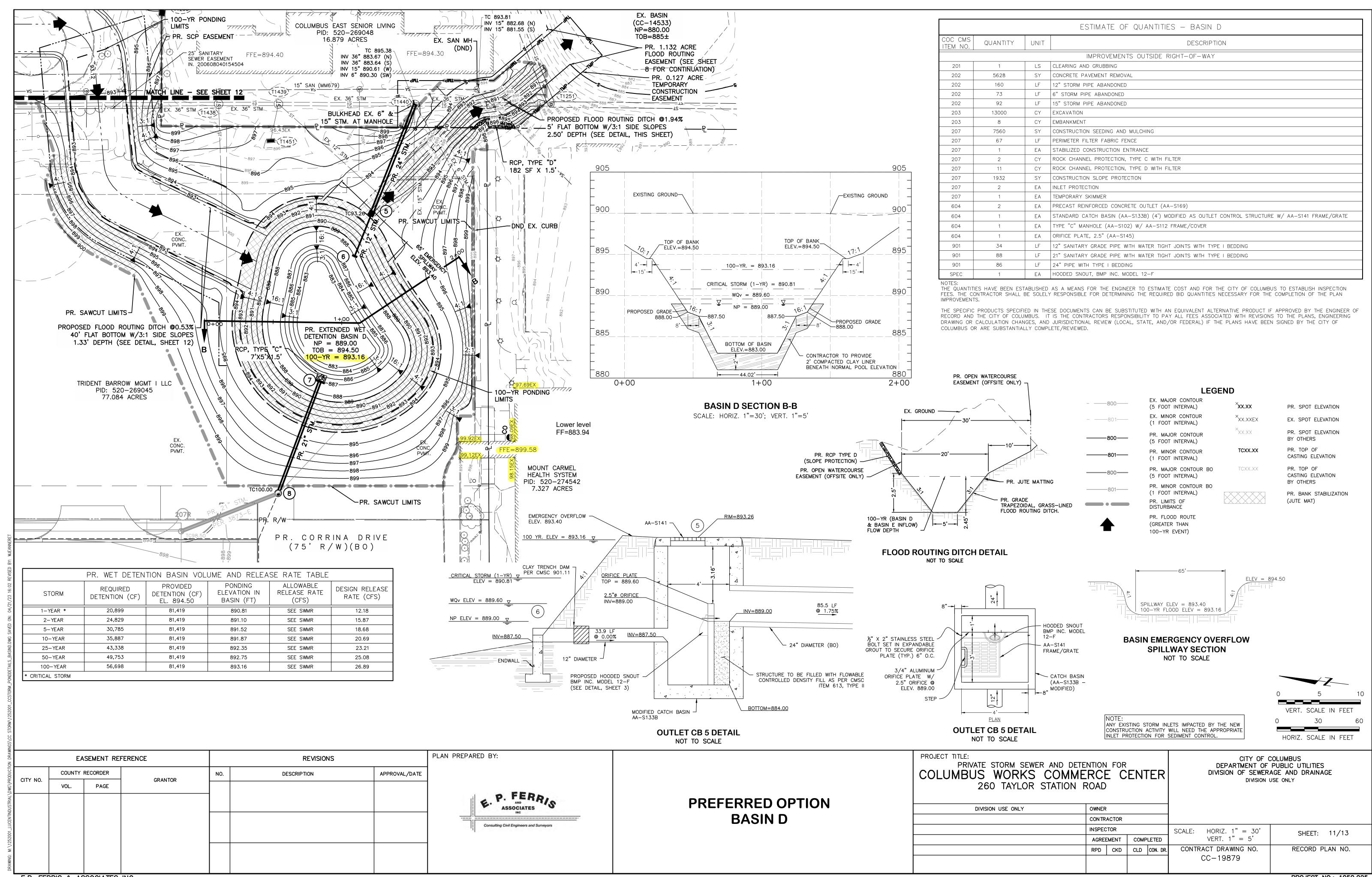
(Minimal Impact Option)



Appendix D

(Preferred Option)





Appendix E

(Water Table Contour Exhibit)

