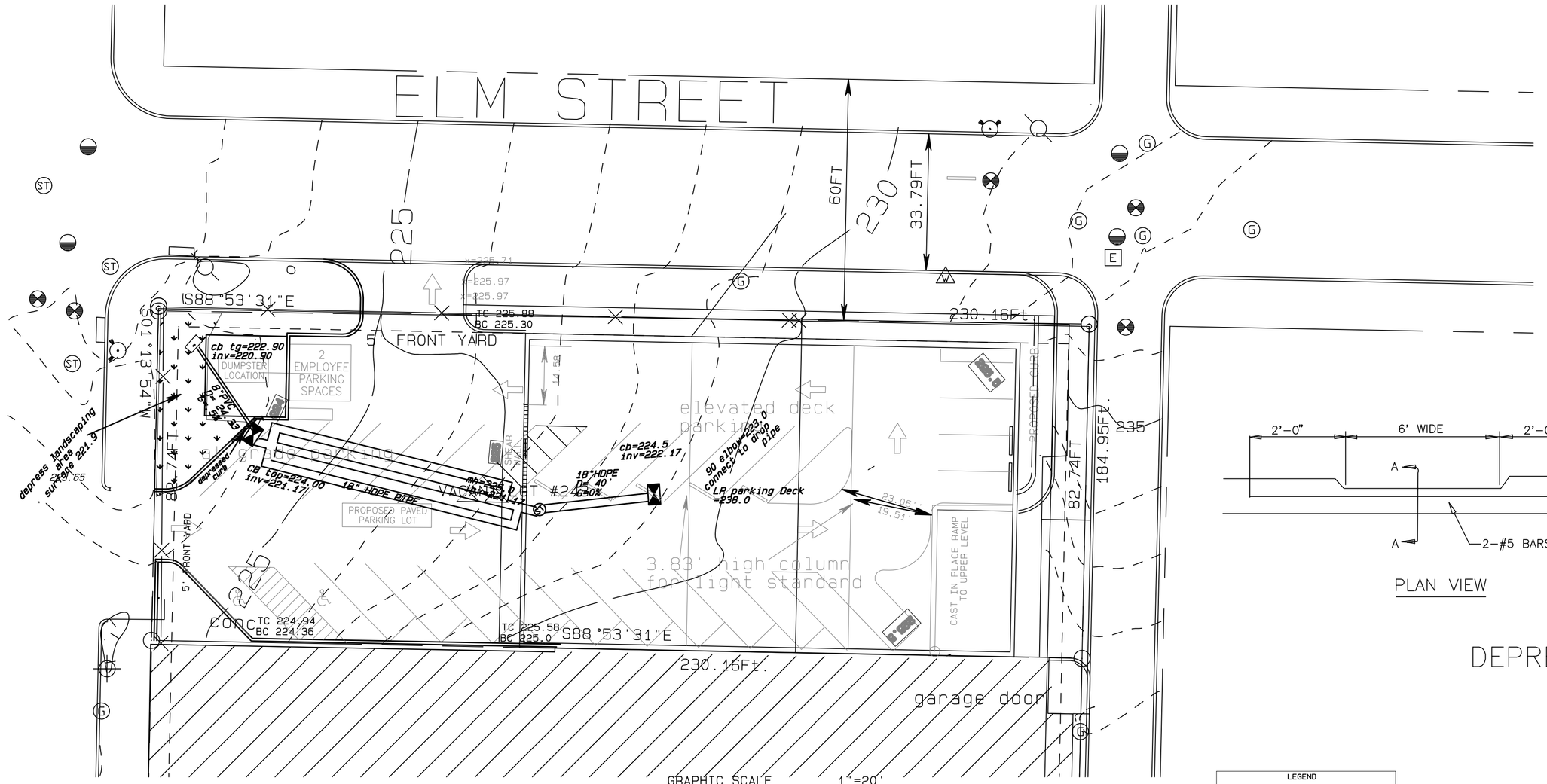
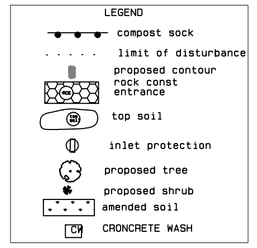
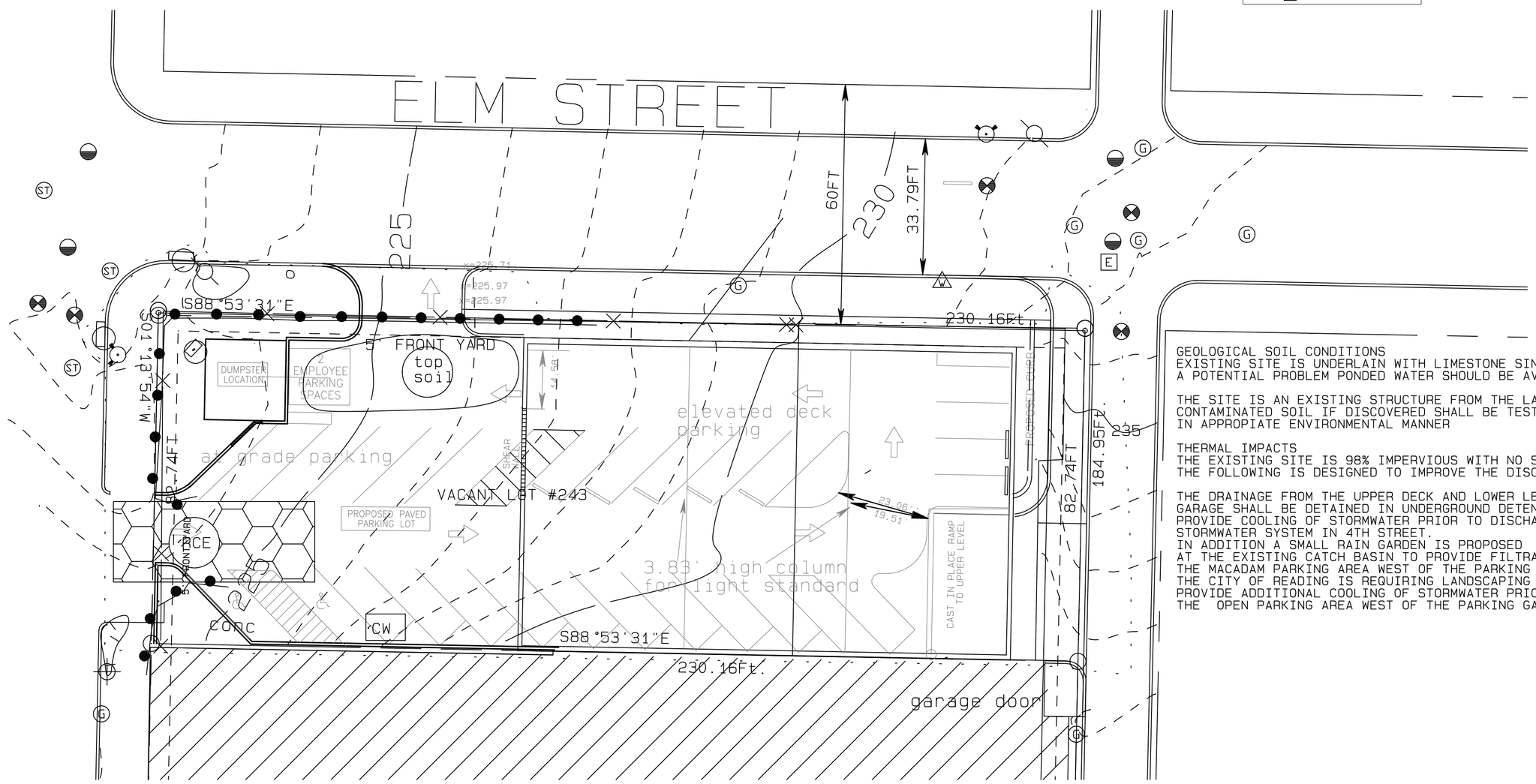


DRAINAGE PLAN





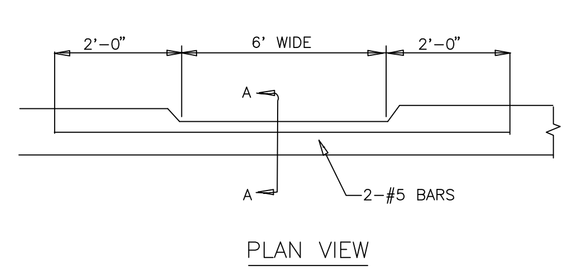
E&S PLAN

GEOLOGICAL SOIL CONDITIONS
EXISTING SITE IS UNDERLAIN WITH LIMESTONE SINKHOLES COULD BE A POTENTIAL PROBLEM PONDED WATER SHOULD BE AVOIDED.

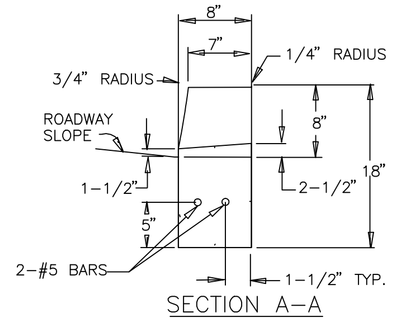
THE SITE IS AN EXISTING STRUCTURE FROM THE LAST CENTURY ANY CONTAMINATED SOIL IF DISCOVERED SHALL BE TESTED AND DISPOSED IN APPROPIATE ENVIRONMENTAL MANNER

THERMAL IMPACTS
THE EXISTING SITE IS 98% IMPERVIOUS WITH NO STORMWATER CONTROLS
THE FOLLOWING IS DESIGNED TO IMPROVE THE DISCHARGE FROM THE SITE:

THE DRAINAGE FROM THE UPPER DECK AND LOWER LEVEL OF THE PARKING GARAGE SHALL BE DETAINED IN UNDERGROUND DETENTION WHICH WILL PROVIDE COOLING OF STORMWATER PRIOR TO DISCHARGE TO THE CITY STORMWATER SYSTEM IN 4TH STREET.
IN ADDITION A SMALL RAIN GARDEN IS PROPOSED TO BE PROVIDED AT THE EXISTING CATCH BASIN TO PROVIDE FILTRATION OF THE RUN OFF FROM THE MACADAM PARKING AREA WEST OF THE PARKING GARAGE
THE CITY OF READING IS REQUIRING LANDSCAPING AND STREET TREES WHICH WILL PROVIDE ADDITIONAL COOLING OF STORMWATER PRIOR TO DISCHARGE
THE OPEN PARKING AREA WEST OF THE PARKING GARAGE

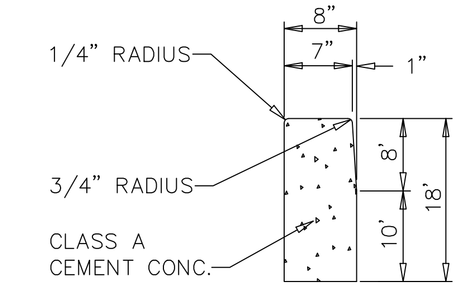


PLAN VIEW

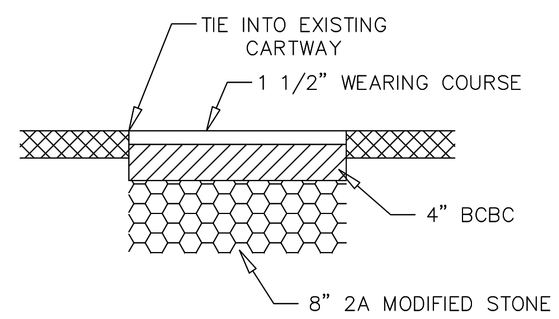


SECTION A-A

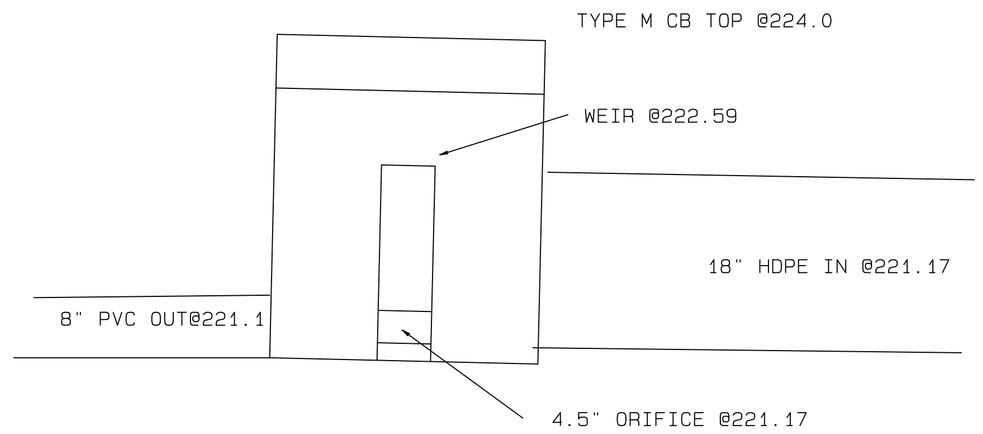
DEPRESSED CURB



CONCRETE CURB DETAIL



TYPICAL PAVING DETAIL



OUTLET STRUCTURE

SOILS INFORMATION 102.4(b) (5) (ii)
The project site is comprised of the soil types as listed below. Information relating to soil type was obtained from the United States Department of Agriculture Soil Conservation Service Survey for Berks County, Pennsylvania.

The Berks County Soil Survey shows:
Soil Name.Runoff.Hazard of Erosion.Urban Land Duffield complex

Soil Limitations:
The major portion of the property consists of urban land Duffield complex.
The following soil limitation may be present on the site:

Cutbank caves: The site shall be graded to promote sheet flow. No channelized flows are present or proposed on the site therefore cutbank caves should not be present

Corrosive to steel: steel and concrete shall be protected with asphalt coating to prevent the effects of corrosive soil
Droughty: N/A
Easily eroded: The soil is easily eroded the site shall be worked to promote sheet flow and prevent concentrated flows of stormwater
Flooding: flood on the site may be present along Commerce Street in the 100 Year storm
Depth to seasonal high water table: N/A
Hydric inclusions: The site was investigated for hydric soils and potential wetland inclusions and none were found on the site
Landslide prone: excavation shall be kept to a minimum, in the event of deep excavation trench boxes shall be used to protect workers from trench collapse
Slow percolation: the site has slow percolation, ponding of water should be kept to a minimum to minimize the saturation of areas of the project
Piping: no detention basins are proposed on the project therefore pipe should not be a problem.
Source of top soil: quality topsoil shall be stockpiled on the site for the final stabilization on the site
Removal of the impervious areas on the site will most likely present a need to import top soil or prepare existing soil with amendments, lime and fertilize to provide quality growing medium for the final stabilization efforts.
Frost action: N/A
Shrink/swell potential: Saturation of soil shall be minimized through proper positive grading. Proposed slabs to be located at doorways shall have foundation to soil undisturbed soil to prevent shrink/ swell conditions
Sinkhole potential: sinkhole potential is present in the soil group. Ponding of water shall be avoided. Excavations on the site has determined that no rock outcrops or solution channels are present.
Ponding: ponding is to be minimized through positive grading practices
Wetness: Wetness is to be minimized through positive grading practices. Any encountered trench water shall be pumped for removal and discharged on stabilized soil through a dirt bag.

PREPARED BY:
TARSON LLC
Corporate Office
P.O. BOX 1518
DOUGLASSVILLE, PA 19518
484 491 1329

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SEAL

REVISIONS			
NO.	DATE	BY	DESCRIPTION
1	6/08/21	DHL	BCO review LTR DATED 5/24/21
2	6/15/21	DHL	RDO planning and deck plans

SCALE: H:1"=20'
DATE: 3/15/21
CADD BY: DHL
CHECKED: DHL

STATUS: LAND DEVELOPMENT PLAN
TITLE: DRAINAGE / E&S PLAN
KBLJ, LLC
CITY OF READING, BERKS COUNTY, PENNSYLVANIA

PLAN NUMBER: T18-011-D
SHEET NUMBER: 4 of 7

Sep 3,2021 11:48:32 Fri
\\tsclient\G\4th and elm\final site with foundations.pro