

USS Webb Solar LLC is a proposed 1.25MWac community solar energy system in Hampshire Township, Kane County, Illinois. As part of the Special Use Permit process USS Webb Solar LLC has entered into a Agricultural Impact Mitigation Agreement (AIMA) as required by Kane County and the State of Illinois Department of Agriculture. As stated in the AIMA, USS Webb Solar is responsible for mitigating any damage to farmland caused by construction or during the duration of project term. Possible damage that USS Webb Solar LLC would be responsible for mitigating includes any damage to subsurface drainage infrastructure like drain tile.

USS Webb Solar LLC is proposed on agricultural land, given the historic land use of the proposed project premises, it is likely that drain tile is present. Shown in the image below is a map from the Kane County GIS (KaneGIS4) web viewer of the known drain tile lines in the area, represented by the dashed orange lines. It appears that there is known drain tile in the immediate vicinity of the project premises but does not show any on the project site itself. The closest known location of drain tile can be seen on the map below. It appears that approximately 850 feet to the west of the main parcel there is confirmed drain tile. This stretch of drain tile continues west roughly 500 feet before it can no longer be identified. This is the only occurrence of known drain tile within half a mile of the proposed project premises currently, however there is likely more close by.





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METHODOLOGY

At the time of this submittal for a Special Use Permit, US Solar nor the landowner has identified any drain tile on the site as shown above. Prior to applying for the building permit, USS Webb will conduct a comprehensive physical drain tile survey, mapping any and all existing drain tile existing on the site. US Solar has retained Westwood Professional Services to conduct a comprehensive drain tile survey to satisfy the building permit requirements for Kane County.

Westwood will employ a Ground Penetrating Radar (GPR) to attempt to locate drain tile locations along with locating any above ground drain tile evidence. This scope of work is dependent on suitable terrain and soil conditions. Upon arrival on site, Westwood will spend a limited time testing the GPR. Westwood will utilize the GPR by towing the unit throughout the project limits in a crosshatch pattern. In certain areas of the project line patterns may deviate based on the findings. If findings show evidence of any main drain tile lines in the field the lines will be spaced in shorter spaced distances to better trace the main drain tile lines. If it is determined that additional GPR scanning is needed a change order will be required. Westwood field crew will record any visible drain tile lines with GNSS survey equipment.

USS Webb Solar LLC

Kane County, IL

US/SOLAR

323 N Washington Ave, #350
Minneapolis, MN 55401

■ Parcels with Site Control



0

500

1,000

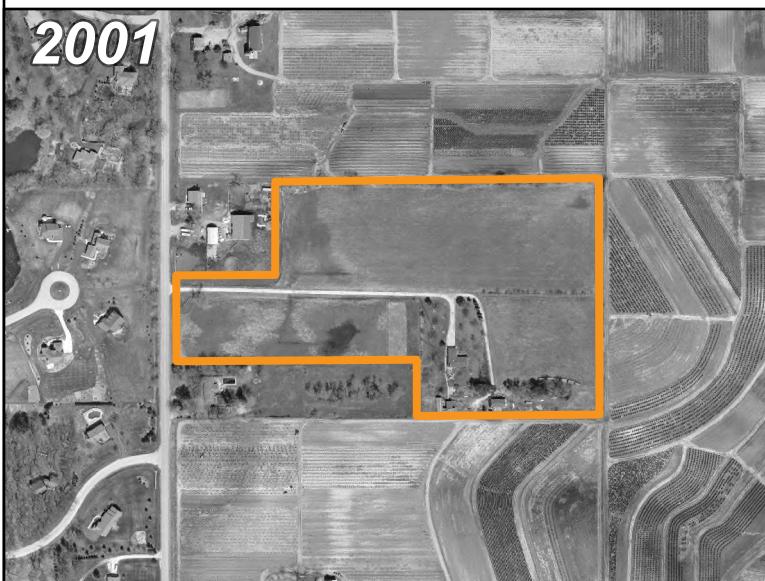
1,500

2,000

Feet

AI Little, 2025. Sources: US Solar, Kane County GIS.

2001



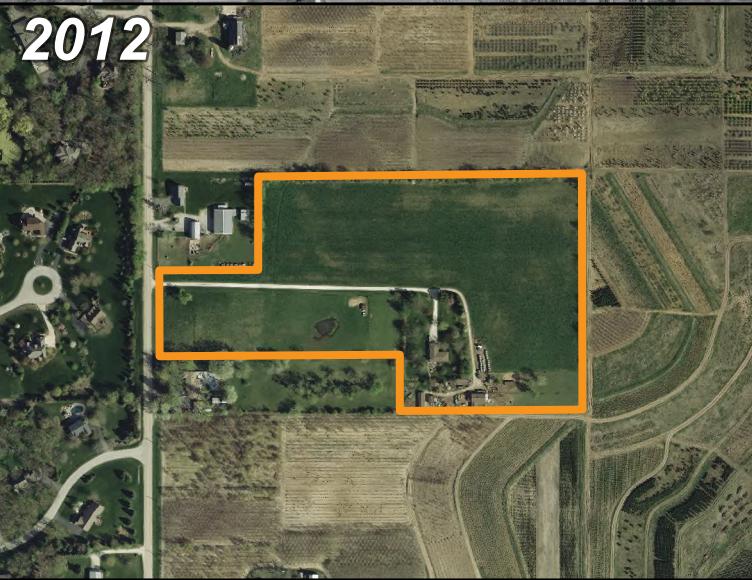
2006



2011



2012



2017

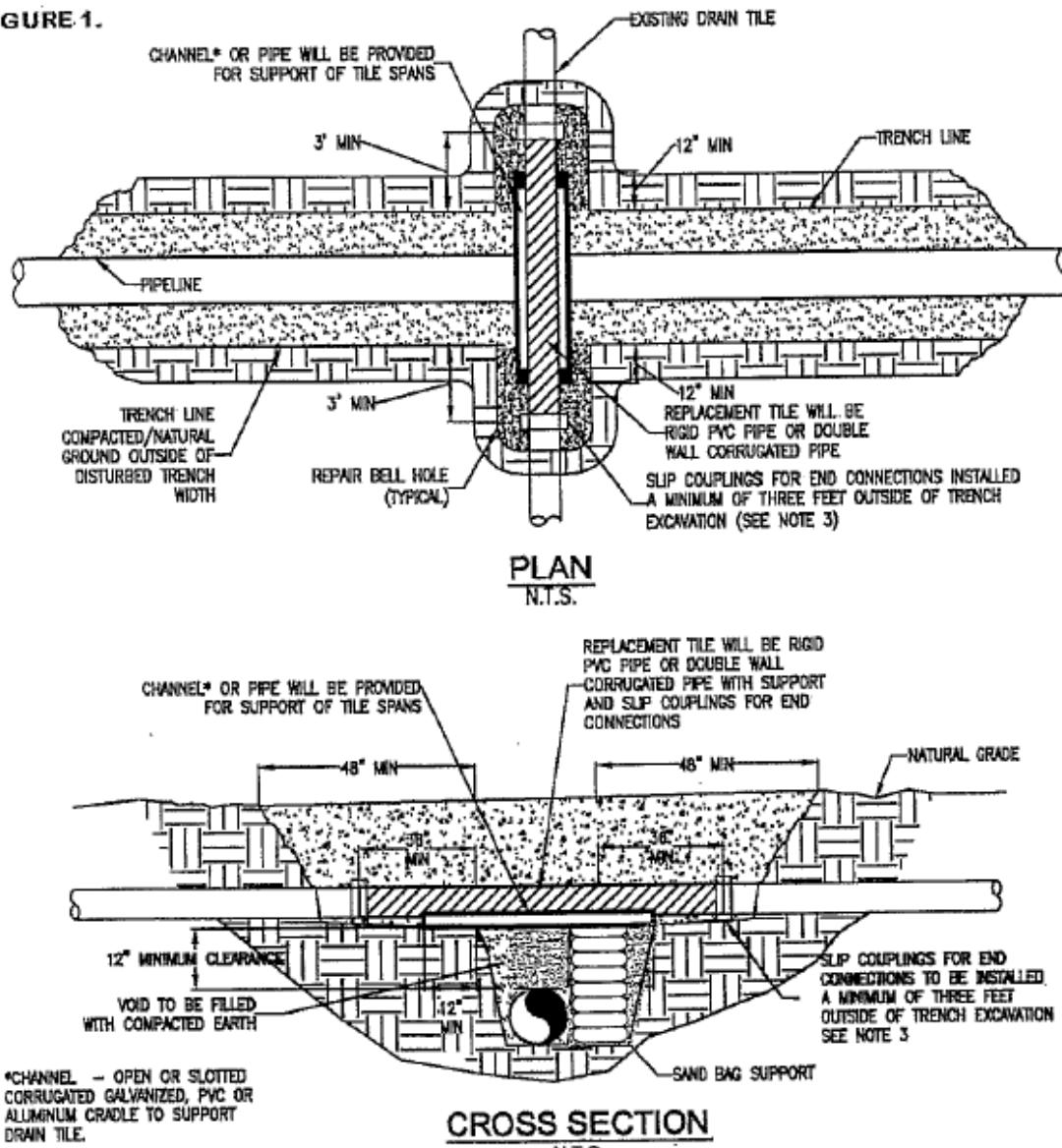


2023



ATTACHMENT

FIGURE 1.



*CHANNEL - OPEN OR SLOTTED CORRUGATED GALVANIZED, PVC OR ALUMINUM CRADLE TO SUPPORT DRAIN TILE.

CROSS SECTION

N.T.S.

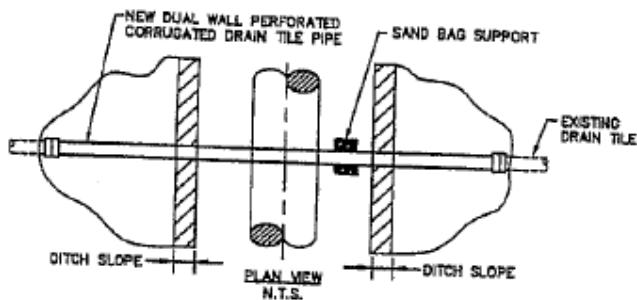
NOTE:

1. IMMEDIATELY REPAIR TILE IF WATER IS FLOWING THROUGH TILE AT TIME OF TRENCHING. IF NO WATER IS FLOWING AND TEMPORARY REPAIR IS DELAYED, OR NOT MADE BY THE END OF THE WORK DAY, A SCREEN OR APPROPRIATE 'NIGHT CAP' SHALL BE PLACED ON OPEN ENDS OF TILE TO PREVENT ENTRAPMENT OF ANIMALS ETC.
2. CHANNEL OR PIPE (OPEN OR SLOTTED) MADE OF CORRUGATED GALVANIZED PIPE, PVC OR ALUMINUM WILL BE USED FOR SUPPORT OF DRAIN TILE SPANS.
3. INDUSTRY STANDARDS SHALL BE FOLLOWED TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES.

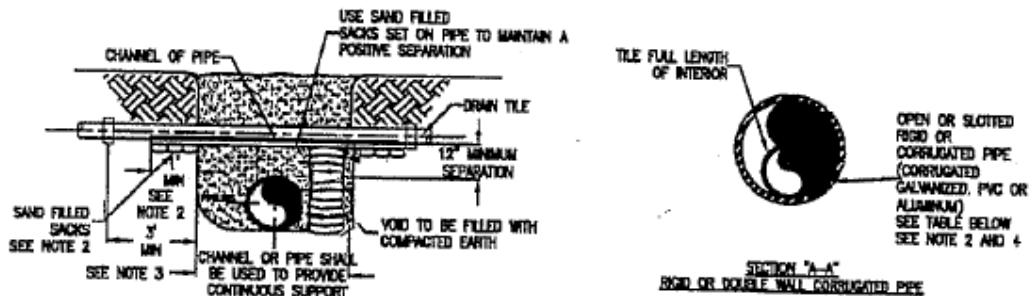
TEMPORARY DRAIN TILE REPAIR

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FIGURE 2.



PLAN VIEW



END VIEWS

MINIMUM SUPPORT TABLE		
TILE SIZE	CHANNEL SIZE	PIPE SIZE
3"	4" @ 5.4 in	4" STD. WT.
4" 5"	5" @ 6.7 in	6" STD. WT.
6" 6"	7" @ 9.8 in	8" - 10" STD. WT.
10"	10" @ 15.3 in	12" STD. WT.

NOTE:

1. TILE REPAIR AND REPLACEMENT SHALL MAINTAIN ORIGINAL ALIGNMENT GRADIENT AND WATER FLOW TO THE GREATEST EXTENT POSSIBLE. IF THE TILE NEEDS TO BE RELOCATED, THE INSTALLATION ANGLE MAY VARY DUE TO SITE SPECIFIC CONDITIONS AND LANDOWNER RECOMMENDATIONS.
2. 1'-0" MINIMUM LENGTH OF CHANNEL OR RIGID PIPE (OPEN OR SLOTTED CORRUGATED GALVANIZED, PVC OR ALUMINUM CRADLE) SHALL BE SUPPORTED BY UNDISTURBED SOIL, OR IF CROSSING IS NOT AT RIGHT ANGLES TO PIPELINE, EQUIVALENT LENGTH PERPENDICULAR TO TRENCH. SHIN WITH SAND BAGS TO UNDISTURBED SOIL FOR SUPPORT AND DRAINAGE GRADIENT MAINTENANCE (TYPICAL, BOTH SIDES).
3. DRAIN TILES WILL BE PERMANENTLY CONNECTED TO EXISTING DRAIN TILES A MINIMUM OF THREE FEET OUTSIDE OF EXCAVATED TRENCH LINE USING INDUSTRY STANDARDS TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES INCLUDING SUMP COUPLINGS.
4. DIAMETER OF RIGID PIPE SHALL BE OF ADEQUATE SIZE TO ALLOW FOR THE INSTALLATION OF THE TILE FOR THE FULL LENGTH OF THE RIGID PIPE.
5. OTHER METHODS OF SUPPORTING DRAIN TILE MAY BE USED IF ALTERNATE PROPOSED IS EQUIVALENT IN STRENGTH TO THE CHANNEL/PIPE SYSTEMS SHOWN AND IF APPROVED BY COMPANY REPRESENTATIVES AND LANDOWNER IN ADVANCE. SITE SPECIFIC ALTERNATE SUPPORT SYSTEM TO BE DEVELOPED BY COMPANY REPRESENTATIVES AND FURNISHED TO CONTRACTOR FOR SPANS IN EXCESS OF 20', TILE GREATER THAN 10" DIAMETER, AND FOR "HEADER" SYSTEMS.
6. ALL MATERIAL TO BE FURNISHED BY CONTRACTOR.
7. PRIOR TO REPAIRING TILE, CONTRACTOR SHALL PROBE LATERALLY INTO THE EXISTING TILE TO FULL WIDTH OF THE RIGHTS OF WAY TO DETERMINE IF ADDITIONAL DAMAGE HAS OCCURRED. ALL DAMAGED/DISTURBED TILE SHALL BE REPAIRED AS NEAR AS PRACTICABLE TO ITS ORIGINAL OR BETTER CONDITION.

PERMANENT DRAIN TILE REPAIR

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