# CONSERVATION PLAN FOR THE FRANKLIN'S GROUND SQUIRREL

(APPLICATION FOR AN INCIDENTAL TAKE AUTHORIZATION)

PER 520 ILCS 10/5.5 AND 17 ILL. ADM. CODE 1080

PROJECT APPLICANT: CITY OF SPRINGFIELD

PROJECT NAME: ARCHER ELEVATOR ROAD - WABASH AVENUE

TO GREENBRIAR DRIVE (CONTRACT NO. 93719)

**COUNTY: SANGAMON** 

AMOUNT OF IMPACT AREA: 11.7 ACRES (2.1 ACRES OF

HABITAT)

FEBRUARY 2019

# PREPARED FOR:

CITY OF SPRINGFIELD DEPARTMENT OF PUBLIC WORKS 800 EAST MONROE SPRINGFIELD, IL 62701

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# **INTRODUCTION**

The City of Springfield is proposing the widening of Archer Elevator Road from Wabash Avenue to Greenbriar Drive in Springfield, Sangamon County, Illinois. The purpose of the proposed Archer Elevator Road improvements is to reconstruct the existing roadway to current urban arterial design criteria based on projected traffic volumes. The need for the project is to improve the safety, traffic capacity and roadside drainage of Archer Elevator Road from Wabash Avenue to Greenbriar Drive. The existing roadway is deficient in structural capacity, horizontal and vertical geometry, runoff conveyance and has no pedestrian or bicycle accommodations. The roadway is experiencing overall pavement deterioration as a result of increasing traffic levels from growing residential development along the project corridor and commercial development in the general project area.

The project seeks Incidental Take Authorization (ITA) from the Illinois Department of Natural Resources (IDNR) for any impacts to and take of the Franklin's ground squirrel (FGS; *Spermophilus franklinii*) as a result of the project.

# **CONSERVATION PLAN**

Incidental taking of Illinois state-listed endangered and threatened species shall be authorized by the Illinois Department of Natural Resources (IDNR) only if the applicant submits a conservation plan that satisfies all criteria established in 17 Ill. Adm. Code § 1080.10.

# 1. DESCRIPTION OF THE IMPACT LIKELY TO RESULT FROM THE PROPOSED TAKING

# A. LEGAL DESCRIPTION OF THE AREA TO BE AFFECTED

The proposed project involves the widening and reconstruction of Archer Elevator Road in Springfield, Sangamon County, Illinois from HPR Road/Yucan Drive to Lavender Lane and from approximately 600 feet south of Barrington Drive to approximately 300 feet north of Greenbriar Drive. The project is located within existing public right-of-way (11.67 acres); all property acquisition required to proceed with the project has been acquired by the City of Springfield. Approximately 0.30 acre of right-of-way from an adjoining agricultural field (Sangamon County PIN 21110100015; 260' Wide Strip Lying in PT E PT W ½ 11-16-6) was acquired for the project. The project is located within the Springfield West USGS 7.5' topographic quadrangle (Attachment A). Relevant portions of the project plans are included in Attachment B, and photographs of the project area are included in Attachment D.

# B. BIOLOGICAL DATA ON THE AFFECTED SPECIES

The Franklin's ground squirrel (FGS; *Spermophilus franklinii*) is currently listed as threatened by the State of Illinois. State listed species are protected under the Illinois Endangered Species Protection Act (ESPA) and regulatory authority lies with the IDNR.

FGS is a large ground squirrel in the family *Sciuridae* resembling the gray squirrel (*Sciurus carolinenssis*). FGS primarily inhabits the northern Great Plains from Alberta, Canada southeastward to Saskatchewan to Missouri, but its range does extend eastward through northern and central Illinois to northwestern Indiana. In Illinois, the species is present within the northern and central portions of the state, north of Madison and Clark Counties (Hofmann 1998).

FGS are omnivores, feeding on plants, seeds, insects, amphibians, mammals and carrion, including predation of small ground-dwelling birds and their eggs. The species hibernates for seven to eight months of the year generally between October and May (Hoffmeister 1989, IDNR 2016). Males typically emerge from hibernation in early April, while the females emerge soon after. Breeding of FGS occurs around early May, with a gestation period of 26 to 28 days. Offspring are likely born between the last week of May and the first week of June, with only one liter produced annually, containing between five (5) to ten (10) pups. The weaning process is complete by 40 days, and young FGS are expected to reach adult size by late September (Hoffmeister 1989, Olson 2002). While out of hibernation, FGS spends about two-thirds of the time within the burrow (Hoffmeister 1989) and is diurnal, being most active in the middle of the day (IDNR 2016), although the species is known to exhibit relatively secretive behavior (Martin et al. 2003). FGS is not as social as other ground squirrels but does live in small loose colonies. (Hofmann 1998). Individuals have an average life expectancy of two (2) to three (3) years, with females surviving longer than males (Cassola 2016).

FGS prefers dense undisturbed vegetative cover of grasses (including tallgrass, mid-grass and cool season), forbs and shrubs that are short enough to allow it to see over while standing upright on its hind legs, but not as short as closely grazed pastures or mowed areas (Hofmann 1998, Martin and Heske 2005, IDNR 2016). Its movements through vegetation produce runways that often lead from burrow entrances to foraging areas (Hoffmeister 1989). FGS dig their burrows underground, and dirt mounds are often piled around the entrance which is concealed by vegetation. The burrow is deep enough to provide insulation to stay cool during summer and avoid freezing temperatures in the winter and is well-drained to avoid flooding (Hoffmeister 1989, Martin and Heske 2004, IDNR 2016). Burrows consist of a widespread set of tunnels and includes a nest lined with grass, as well as food storage chambers (Hofmann 1998).

The decline of FGS in the eastern and southern portion of its range is most often attributed to habitat fragmentation as a result of urban development and agricultural expansion and conversion to row crops (Johnson and Choromanski-Norris 1992). A study conducted in 2005 (Martin and Heske 2005) suggested the species may disperse more than one (1) km from its original location and that dispersal appears to be age-dependent for both sexes, occurring at nine (9) to eleven (11) weeks of age. Agricultural fields did not seem to hinder movement in late July and August before row crops were harvested; however, the authors noted that open areas such as roadway may act as a barrier for some individuals. In agricultural areas, suitable habitat typically occurs along field edges, in fencerows, old fields, infrequently mowed roadsides, prairie cemeteries, ditch banks and railroad rights-of-way. FGS will often enter fields to eat corn and soybean plants, as well as pest insects (Hoffmeister 1989, Hofmann 1998, Huebschman 2017). The species is also frequently found along roadside or railroad rights-of-way, as that is often the only available patches of habitat that meet FGS needs and are an important resource in the southern part of their range (Huebschman 2017). Burrow systems have also been observed alongside rocks, trees, trash heaps and buildings, which may offer some level of protection from predators and weather (Martin and Heske 2004). FGS may climb trees, although it is primarily a ground species (IDNR 2016).

The Report of Possible Resource Conflicts produced by IDNR for the project on January 30, 2019 indicated the presence of FGS within the project area and surrounding vicinity (Attachment C). Dr. Tih-Fen Ting of the University of Illinois at Springfield stated that radio-tracking of juvenile FGS indicate they use the agricultural field on the west side of Archer Elevator Road, from south of Iles

Avenue and east of Lenhart Road, frequently for dispersal or movement (Attachment C). According to Dr. Ting, the agricultural field has been heavily used by the FGS because it is adjacent to the Sangamon Valley Trail where a colony resides. Based on historical data, this is the densest colony known within the state (Ting 2019). Monitoring of the colony has shown that its abundance has decreased by thirty (30) individuals between 2015 and 2018. Additionally, FGS carcasses have been collected from Archer Elevator Road and Iles Avenue, indicating that these roadways have acted as movement and dispersal barriers for the local FGS population (Ting 2019).

# C. DESCRIPTION OF ACTIVITIES THAT WILL RESULT IN THE TAKING

The project will widen the existing two-lane rural roadway to a three-lane minor arterial (urban) roadway with center left-turn lane and dedicated bike lanes on both the northbound and southbound lanes, curb and gutter and storm sewer. Sidewalk will also be installed on both the east and west sides of Archer Elevator Road. The project will result in a total length of improvement of 0.91 mile. The posted speed limit will be lowered from 40 mph to 35 mph along Archer Elevator Road.

Heavy machinery and equipment will be used to complete construction of the project, which includes full depth excavation and placement of fill materials. The project will be completed in two stages. Stage 1 is planned to begin at the earliest in June 2019 and will complete widening and addition of curb/gutter, sewer and sidewalks along Archer Elevator Road from the HPR/Yucan Drive intersection to north of Fielding Lane. Stage 1 will commence through November and start again when weather is favorable in spring 2020 and is planned to be completed by July 2020. Stage 2 will begin after all Stage 1 construction has been completed, including removal of detour signing and traffic control, and will complete widening and addition of curb/gutter, sewer and sidewalks along Archer Elevator Road from south of Barrington Drive to the Greenbriar Drive intersection. Equipment will be staged anywhere within the public right-of-way behind Road Closure barriers, which will be placed at the north and south ends of each Stage.

FGS and their burrows may be affected by the construction activities within the Stage 1 area, as it is south of lles Avenue and adjacent to the agricultural field identified by Dr. Ting as an FGS dispersal and temporary burrow area. The project will also remove a strip of the field from agricultural production, having acquired it as permanent public right-of-way and planned conversion to roadway and sidewalk. A small loss of suitable habitat (approximately 2.1 acres) will occur due to the project. Stage 2 is not within observed FGS activity areas, as it is north of lles Avenue and the agricultural field identified by Dr. Ting as the extent of FGS use, and it has been completely developed for residential use.

Active FGS may be at higher risk of being injured or killed during construction; however, construction noise and vibration activity may serve as a deterrent for movement of individuals in the project area. Individual FGS may experience mortality during construction if they cross paths of construction equipment; it is expected though that machinery would move slowly enough to allow escape time of FGS. These impacts are temporary during the duration of project construction. Dr. Ting has indicated that mortality of FGS has previously been recorded along Archer Elevator Road south of Iles Avenue as individuals attempt to cross the road. Widening the road will permanently create a wider and more dangerous barrier for FGS to cross, increasing their exposure to potential traffic hazards and risk of mortality. Permanent noise and vibration impacts along the roadway corridor are not expected to significantly change from existing conditions.

Wetlands are not present within the project area. Landscaped tree removal will also occur as part of the project along the east side of Archer Elevator Road at the Hedley Road intersection and between Fielding Drive and Lavender Lane in Stage 1. Landscaped tree removal will occur throughout the Stage 2 project area. Tree replacement will occur in areas where trees were removed for project construction.

# D. EXPLANATION OF THE ANTICIPATED ADVERSE EFFECTS

Project construction will occur during all life stages of the FGS. Construction activity may temporarily disturb active FGS, and individuals may be harmed or killed by heavy machinery and equipment during project construction if they are dispersing through the project area. Breeding or hibernating individuals or young may also experience adverse effects and mortality if burrows are located within the project area due to noise and vibration during construction, as well as soil excavation activities. Activities may disrupt mating individuals or impact gravid females from obtaining adequate nutrition to raise their young and may result in loss of individuals through dispersal, predation, injury or death; however, noise of construction equipment and machinery may serve as a deterrent and keep individuals from foraging near the project area during construction. Location data from IDNR indicates that individuals and burrows have been located within the project area, along the existing road embankment. Dr. Ting indicated that these individuals were likely juvenile males that were exploring and dispersing across the agricultural field from the main Sangamon Valley Trail colony. While the project will remove the existing roadway embankment, it will recreate an embankment approximately 40 feet west of the current location along the edge of project improvements. Because the project will generally maintain the presence of an existing road, and considering minimization and mitigation measures described below, it is anticipated that risk of a decrease in FGS population abundance as a result of project construction is low.

Juveniles and adults that are dispersing and foraging in the immediate area of the project and attempting to cross Archer Elevator Road will most likely be permanently adversely affected after project completion. Because the project will widen the existing roadway, FGS attempting to cross between traffic on Archer Elevator Road may experience a higher rate of mortality due to a wider permanent barrier to cross and associated increased traffic due to increased capacity of the roadway. Mortality associated with the widened roadway barrier and increased traffic will be mitigated by the lowered posted speed limit along the roadway because it will provide a greater reaction time for vehicles to slow down and/or stop for any crossing FGS (Stanley et al. 2006). The widened roadway may contribute to reduced FGS population due to lowered fecundity, poor individual conditions or mortality due to lack of access to key resources if available habitat for FGS is further fragmented; however, it should be noted that suitable habitat for FGS is not present on the east side of Archer Elevator Road, having been completely developed to residential housing subdivisions. Individuals crossing east across the road often turn around and return west (Ting 2019), likely due to the fact that there is a perceived barrier (i.e. the housing development) preventing further movement eastward. Therefore, it is unlikely that the project will negatively impact FGS access to habitat and quality resources elsewhere.

Any temporary construction or permanent night-time lighting will not impact the FGS as it is diurnal and not active during night-time hours.

It is uncertain how many individuals will be adversely affected and taken as a result of the project. A survey of the project area for FGS was not required by IDNR to support this ITA and Conservation

Plan due to recent known occurrences of the species in the vicinity. As noted above, project construction is not expected to significantly impact individuals' mortality, although minor disturbance and stress may be experienced, resulting in temporary disruption to reproduction, foraging and hibernation activities. Potential permanent adverse effects as a result of the project are individual mortality or injury related to attempting to cross the roadway between traffic gaps. It should be noted that the area surrounding the project and the agricultural field used by FGS has been experiencing high development and will likely continue to do so. Although the project does not impact FGS overall access to habitat and resources, continued land development in the area may further fragment habitat and place further stress on the local FGS population.

# 2. MEASURES THE APPLICANT WILL TAKE TO MINIMIZE AND MITIGATE THE IMPACT AND THE FUNDING THAT WILL BE AVAILABLE

# A. PLANS TO MINIMIZE THE AREA AFFECTED, THE ESTIMATED NUMBER OF INDIVIDUALS THAT WILL BE TAKEN AND THE AMOUNT OF HABITAT AFFECTED

The project has already minimized the area affected by the proposed action during the design phase. A four-lane urban section with bike lanes and sidewalks was originally proposed, but due to existing residential development and limited right-of-way, the three-lane typical section was selected as the best solution. This decision significantly decreased the amount of habitat that will be impacted by the project.

The majority of the permanent impact of Stage 1 (the portion of the project that has been identified to impact FGS) will be limited to the existing roadway surface and existing public right-of-way and temporary easements, approximately 11.7 acres. Approximately 2.1 acres (within an approximately 40-foot wide and approximately 0.48-mile long strip paralleling the existing road) of existing active agricultural field and roadside embankment within the existing right-of-way along Archer Elevator Road will be impacted by the project. Although agricultural crop row fields do not provide adequate habitat for FGS, individuals do appear to utilize the field for foraging and dispersal. The road embankment offers short-grass and cool-season grass burrowing habitat for FGS, as evident by the presence of individual burrows observed along the roadway (IDNR 2019 and Ting 2019). A housing development is immediately adjacent to the east and provides poor habitat for FGS.

Based on the nature of the project, available habitat within the project area and the known use of the project area by FGS for dispersal and foraging, potential take of one to three FGS individuals is estimated. Take of individuals is expected to be low; however, determining an exact take value is not feasible because individuals use the area for dispersal and foraging, i.e. they come and go.

All workers will be educated on the appearance and ecology of FGS and will be instructed to make note of any FGS that are taken, including documentation in the form of photographic evidence and location information of each incident.

# B. PLANS FOR MANAGEMENT OF THE AREA AFFECTED THAT WILL ENABLE CONTINUED USE BY THE SPECIES

The posted speed limit will be lowered from 40 mph to 35 mph along Archer Elevator Road. It is expected that this minimization effort will enable the continued use of the project area by the FGS, should they continue to disperse to and/or across Archer Elevator Road after construction is complete.

Post-construction management of the project area will continue as is. Residential development borders the east side of Archer Elevator Road, and agricultural use to the west of the project in the form of row-crops will continue, at the current property owner's discression. Right-of-way along Archer Elevator Road will be reseeded with Illinois Department of Transportation (IDOT) Standard Seeding Class 2 – Roadside Mixture:

- Tall Fescue 100 (110)
- Perennial Ryegrass 50 (55)
- Creeping Red Fescue 40 (50)
- Red Top 10 (10)

Minimal mowing along the newly constructed roadway embankement will continue after project completion, which will generally provide the same amount and quality of burrowing and tunnel habitat for FGS as currently exists. The City has a general mowing scheduling of two times per month, weather dependent, from April to November for all city right-of-way.

# C. DESCRIPTION OF ALL MEASURES TO BE IMPLEMENTED TO AVOID, MINIMIZE AND MITIGATE THE EFFECTS OF THE PROPOSED ACTION

Various minimization and mitigative measures will be implemented through the course of the project. Within 30 days prior to construction, Dr. Ting will visit the Stage 1 project area to conduct a "signs" survey, investigating the project area to determine if any signs (i.e. burrows, vegetation runways, etc.) of FGS are present and, if so, to provide her professional opinion on how to best avoid and mitigate take of individuals. In the unlikely event that prior to or at the time of excavation activity, any FGS individuals or burrows are observed within the project area, IDNR assistance will be requested for information on the least impactful method of relocation prior to construction. The taking of FGS individuals during construction will only be performed inadvertently or as a last resort. If FGS individuals are taken during construction, each instance will be documented and recorded in bi-weekly progress reports. Prior to excavation activity, photographs of the ground surface will be taken.

Erosion control fencing with an embedded silt screen will be placed along the permiter of the project area during construction. While the fencing is part of standard Best Management Practicies (BMPs) to prevent erosion and siltation off the project area during construction, it is anticipated that it will also minimize the impact of construction activities on FGS by preventing and detering FGS individuals from entering the construction area. The fencing will be erected prior to construction and will be removed after the project is complete. Soil stockpiles will be placed at the following locations along the project:

- Stage 1: Sta. 23+00 (+/-) to Sta. 30+00 (+/-) RT. (east side of roadway from approximately 130 feet north of Westgate Drive to approximately 730 feet to the north)
- Stage 1: Sta.37+00 (+/-) to Sta. 49+00 (+/-) LT. (west side of roadway from approximately 160 feet south of Hedley Road to approximately 100 feet north of Fielding Drive)
- Stage 2: Sta. 78+00 (+/-) to Sta. 85+00 (+/-) RT. (east side of roadway from approximately 410 feet south of Barrington Drive to approximately 80 feet south of Greenbriar Drive)

Due to the potential for squirrels to burrow into the friable soil stockpiles and the resulting potential impact to the species that may occur during removal or spread of the soil, stockpiles remaining for

longer than three consecutive days will be covered and sealed with plastic and weighted down, and the stockpile permiter will be encompassed with silt fence. A special provision will be written into the project plans.

Permanent wildlife crossing signage specific to FGS will be placed along the roadway where speed limit signs are posted. Signage will help to minimize any increased risk of mortality due to widening of the roadway (a recorded barrier to FGS movement) without installation of a wildlife underpass. Studies have shown that enhanced sign treatments along roads decreased driver speeds and increased the onset of braking distance and reaction time (Stanley et al. 2006). Effectiveness of wildlife crossing signage is increased when a standard sign is paired with a speed limit sign or with a flashing beacon, resulting in a statistically significant speed reduction compared to a standard sign only (Bank et al. 2002, Stanley et al. 2006). Installing a flashing beacon with the speed-limit and FGS wildlife crossing signage should encourage drivers to maintain the posted speed throughout the corridor. These measures will be added to the design plan and will ensure that traffic moves through the corridor to allow enough reaction time to slow for crossing FGS, which will prevent an increase in the risk of an individual's mortality.

Additionally, combining traffic volume with predictable wildlife behavioral responses to perceived risk can improve management efforts to reduce animal-vehicle collisions and the barrier effect of roads. Individuals may avoid roads, speed across roads, pause on roads, or fail to respond based on their behavioral adaptation in response to perceived risk (Jacobson et al. 2016). It is likely that the FGS generally exhibits pausing and/or speeding characteristics in response to perceived threats, although reactions will vary based on the individual and is likely not species specific. Pausers rely on alternatives to fleeing (such as crypsis) and respond to threat by reducing speed or freezing, increasing time spent on the roadway and mortality risk. When traffic reaches sufficient volumes for an animal to pause before crossing, probability of mortality decreases as the animal will likely avoid crossing. Speeders exhibit anatomical and behavioral adaptations to flee as a primary response to threat. The probability of mortality increases slowly with increased traffic volume when speeding allows them to exploit traffic gaps; when traffic reaches a threshold in which fleeing movements are no longer sufficient to exploit gaps, probability of mortality increases steeply until the traffic volume prompts avoidance. At high traffic volumes (AADT between 5,000 and 9,999) fewer carcasses of pausers and speeders are expected than at lower traffic volumes because pausing begins prior to entering the road and avoidance reduces mortality. The design average annual daily traffic (AADT) for the project is 9,700; thus, fewer FGS individuals should attempt to cross Archer Elevator Road after project completion.

The City of Springfield has developed an educational outreach plan (valued at \$12,500) for the neighborhoods near the FGS population at Sangamon Valley Trail, including the broader city and for users of Archer Elevator Road (Attachment F). The plan involves communication via emails through the City's list-serv, social media accounts, and outreach to area homeowners associations and parties of interest, such as the YMCA. Public awareness of the presence of a sensitive state-listed species population should aid in slowing traffic and maintain drivers' awareness along roads in the area to decrease FGS-vehicle collisions.

Additionally, the City of Springfield will support local habitat restoration effort of the FGS as additional mitigation by providing \$15,000 to fund the following restoration activities of the Sangamon Trail segment from Bunker Hill Road to Iles Avenue via the Illinois Wildlife Preservation Fund.

- Removeal of small gray dogwood, small black cherries and sumacs
- Remove lower branches of all trees greater than 5 inches dbh
- Apply herbicide as needed to woody species, as recommended by IDNR, and reapplication during Year 2 post-restoration

Total mitigation cost for impact to the local FGS population is valued at \$27,500. This mitigation cost includes the value of implementation of the Educational Outreach Plan and the value of the ecological restoration support.

### D. PLANS FOR MONITORING EFFECTS OF PROPOSED ACTIONS ON THE SPECIES

The roadway widening project will be implemented on behalf of the City of Springfield. The City will ensure the conservation plan is implemented, including on-site daily inspections.

In addition to Dr. Ting's completion of a "signs" survey prior to construction, the Resident Engineer and the Construction Engineer will monitor the areas of proposed construction activity during a period within 30 days of the proposed start of construction and 30 days after completion of construction. Any observance of FGS, evidence of their burrows or evidence of FGS activity in or nearby the construction area will be noted with photographs, narrative descriptions, dates and frequency of observation. If FGS are observed, Dr. Ting will be consulted to determine if further action is warranted.

The Construction Superintendent will monitor the construction area on a daily basis during construction and document as described above. Documentation or notation of the lack of observance of individual FGS or FGS burrows or activity will be provided in the form of biweekly progress reports. These reports will be forwarded to IDNR immeditately upon recipt by the City of Springfield's project manager.

Post-construction scientific monitoring for FGS will occur after the project is completed to monitor species recovery. The City of Springfield will ensure that a visual survey for FGS in and around the project area by a qualified biologist will be completed during the active season in June and September 2020, followed by a trapping survey in June and September 2021. A report written by the biologist after each survey describing their findings will be submitted to IDNR by the City.

To measure effects of the educational outreach plan on FGS, the City will administer a pre-project online survey related to citizens' current awareness of the species and a post-outreach survey to measure change in citizens' awareness and opinion of the species. The surveys will be sent via email to the adjacent HOA community members. Refer to the Educational Outreach Plan (Appendix F) for additional information.

# E. ADAPTIVE MANAGEMENT PRACTICES

If FGS are observed at any time during construction, immediate measures will be taken to avoid direct impact to FGS individuals. Work may continue elsewhere on the project as long as the observed FGS individual will not be harmed, and Dr. Ting will be immediately consulted to determine if further action is warranted.

Should new information be discovered prior to or during construction that may impact the effectiveness of this plan, the City of Springfield and their consultants and contractors will alter the

plan accordingly. In doing so, the aforementioned will coordinate with IDNR on a description of the changed circumstances or new information and propose modifications to the plan. In this scenario, the City and their consultants and contractors will request a timely response from IDNR in order to reduce delays while work is being conducted in the vicinity of FGS habitat.

It is not anticipated that the project will pose any significant impact to FGS related to environmental variables that the species would experience otherwise outside of the project area. The project will follow general stormwater pollution prevention plan (SWPPP) measures to limit flooding, erosion and sedimentation as a result of the project.

# F. VERIFICATION THAT ADEQUATE FUNDING EXISTS

The project will be funded by the City of Springfield and is also receiving federal funds administered through IDOT. Adequate funds to complete the project and associated FGS mitigation measures have been committed to by the City and have been set aside and are available as per the project plan and construction schedule. This Conservation Plan will be fully incorporated into the construction plans and onsite supervision and monitoring programs.

# 3. DESCRIPTION OF ALTERNATIVE ACTIONS CONSIDERED BUT NOT SELECTED

**Alternative 1 ("No-action"):** This alternative is not feasible because it will not meet the purpose and need of the project. As development continues in the area and traffic use continues along Archer Elevator Road, the existing road will continue to be deficient in structural capacity, horizontal and vertical geometry, runoff conveyance and pedestrian/ bicycle accommodations and will continue to deteriorate and will not improve safety along the corridor. For these reasons, this alternative was not selected.

Alternative 2 (Installation of a wildlife underpass under Archer Elevator Road): While Jacobson et al. (2016) recommends use of a wildlife-corridor structure to restore and maintain access to key habitats to mitigate for barriers, it should be considered that suitable habitat for the FGS is not present on the east side of Archer Elevator Road as it is completely developed with housing subdivisions. Installing a wildlife underpass for use by the FGS would not be practicable as it would effectively serve as a "bridge to nowhere", and the larger issue of lack of available habitat would not be solved, a common issue that Rodney van der Ree et al. (2015) calls attention to. Additionally, as the roadway design had already been completed, design edits would have added additional cost to the project to work around the planned closed-sewer system, in addition to the cost of the underpass itself. For these reasons, this alternative was not selected.

Alternative 3 (Installation of a permanent exclusion fence along Archer Elevator Road): This alternative was not selected due to potential unintended ecological consequences placed upon FGS and other species. This approach limits and/or prevents wildlife from performing daily tasks per their life history requirements. Unintended consequences of installation of a permanent exclusion fence includes impacts to other species that were not targeted in the management plan. For example, the presence of fencing may cause predators to spend more time in the area, which elevates the predation pressure on FGS, or raptors may utilize the fence for perching, which may result in collision with traffic as they swoop to hunt. For these reasons, this alternative was not selected.

# 4. DATA AND INFORMATION TO INDICATE THE PROPOSED TAKING WILL NOT REDUCE THE LIKELIHOOD OF THE SURVIVAL OF THE ENDANGERED SPECIES

Populations of FGS are cyclical and vary from year to year, although current trends indicate that populations continue to decline (Martin et al. 2001). Local disturbances affecting FGS population trends may be natural or anthropogenic; however, habitat loss and fragmentation likely have greatly contributed to population decline.

Implementation of this Conservation Plan and any incidental taking of FGS in connection to the project will most likely not reduce the likelihood of the survival or recovery of individuals in this local population or within the State of Illinois, especially considering that the main local colony resides west of the project area along the Sangamon Valley Trail, over 0.75 mile away. Minimization and mitigation measures describe above in the Conservation Plan should deter individuals from utilizing the project area during and after construction and should also decrease mortality risk of individuals that attempt to cross Archer Elevator Road. Additionally, the project area is not the only location in Illinois where the affected species are found (Martin et al. 2001). Therefore, the incidental taking of FGS for this project will not reduce the likelihood of the survival of the species in the wild within Illinois.

# 5. IMPLEMENTING AGREEMENT

Implementing Agreement for Conservation Plan
for the State-threatened Franklin's Ground Squirrel (*Spermophilus franklinii*),
which inhabit the Sangamon Valley Trail and adjacent agricultural field in the vicinity of the Archer
Elevator Road – Wabash Avenue to Greenbriar Drive Widening project in
Springfield, Sangamon County, IL

The Illinois Department of Natural Resources (IDNR) is responsible for the review of this Conservation Plan and for subsequent issuance of the Incidental Take Authorization. The City of Springfield and their consultants and contractors are responsible for all biological clearance coordination and recommendations related to the project, securing authorization for the incidental take, implementation of this Conservation Plan and inspection of the work and contractor compliance with the contract documents, as applicable.

The activities in the Conservation Plan will be implemented within thirty (30) days prior to construction (i.e. "signs" survey), during and throughout construction (i.e. continued monitoring and documentation of any FGS taken and biweekly reports) and after construction (i.e. local education and outreach, restoration funding, post-construction species monitoring). Construction is planned to begin at the earliest in June 2019 and be completed in winter 2020.

As Mayor for the City of Springfield, I, James O. Langfelder, do hereby certify that each participant in the execution of the Conservation Plan has the legal authority, as per contractual agreement, to carry out their respective obligations and responsibilities under the conservation plan, and I do hereby provide assurance that all activities associated with the Archer Elevator Road Wabash Avenue to Greenbriar Drive proposed action will be performed in compliance with all applicable federal, state and local regulations pertinent to the proposed action and the execution of the conservation plan. No federal authorizations for a taking of any other species is required or have been issued to the application for the project.

James O. Langfelder, Mayor

City of Springfield, IL

Date

# REFERENCES

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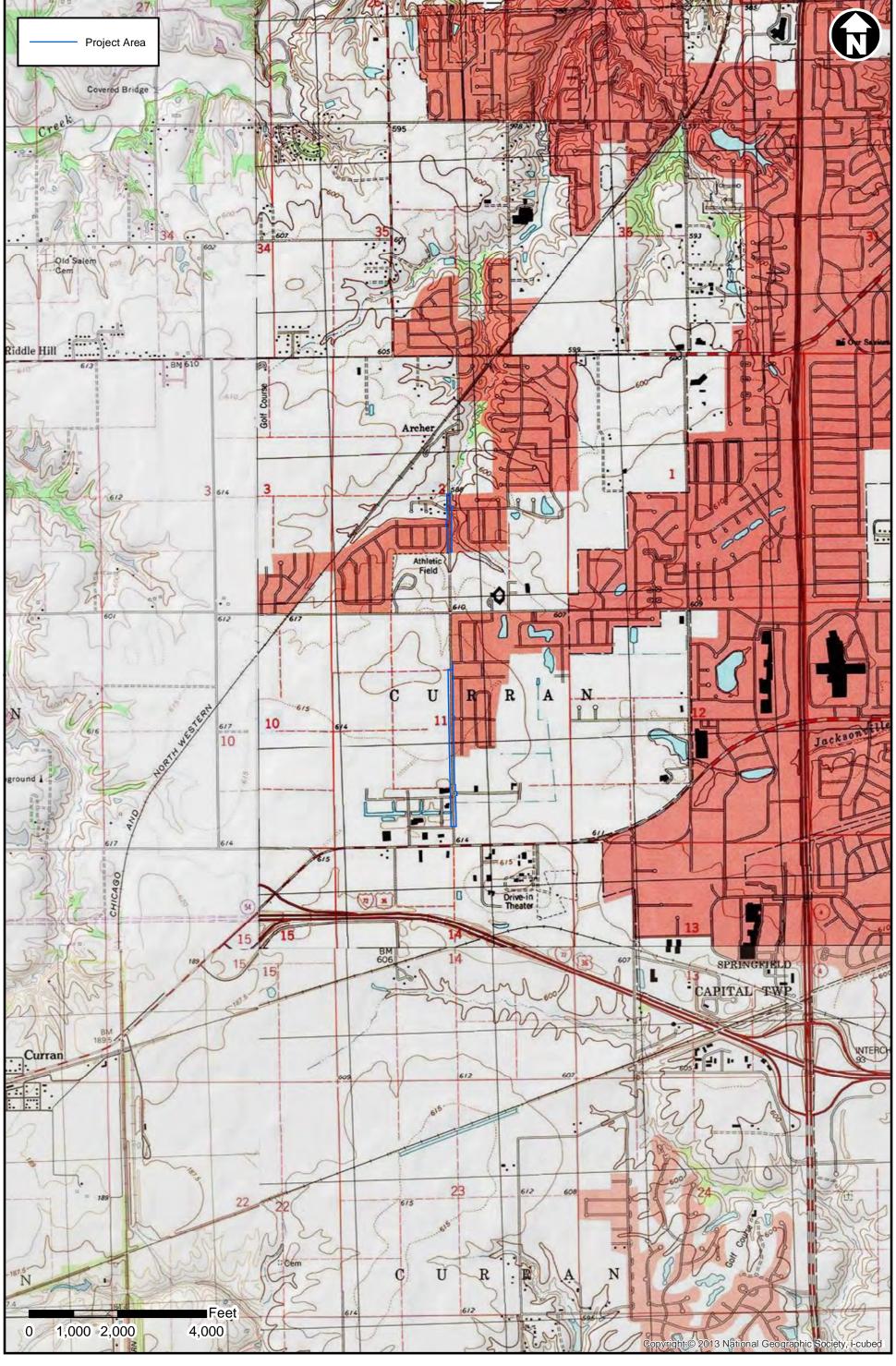
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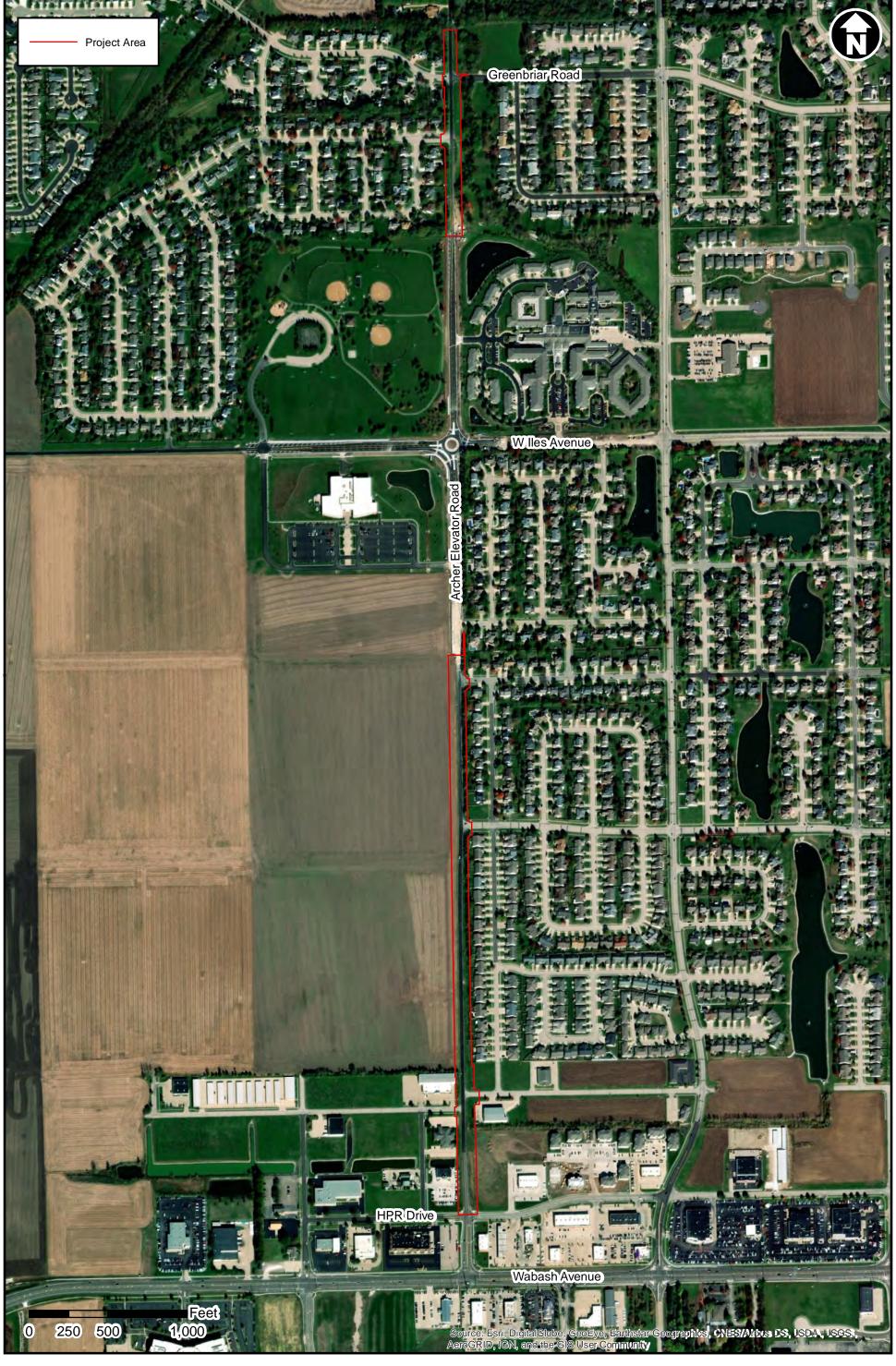
# CP for Franklin's Ground Squirrel Archer Elevator Rd – Wabash Ave to Greenbriar Dr.

ATTACHMENT A: MAPPING

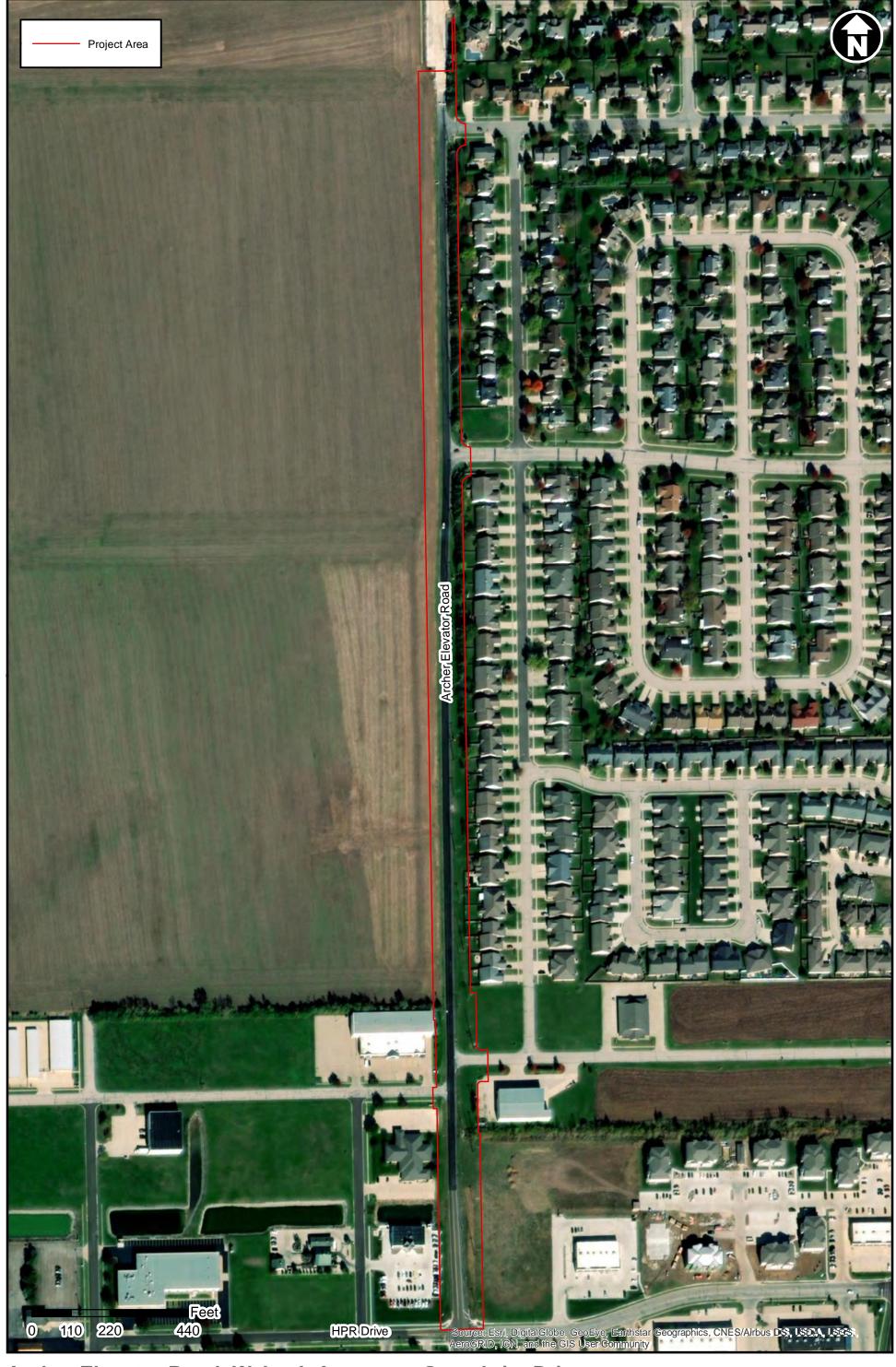




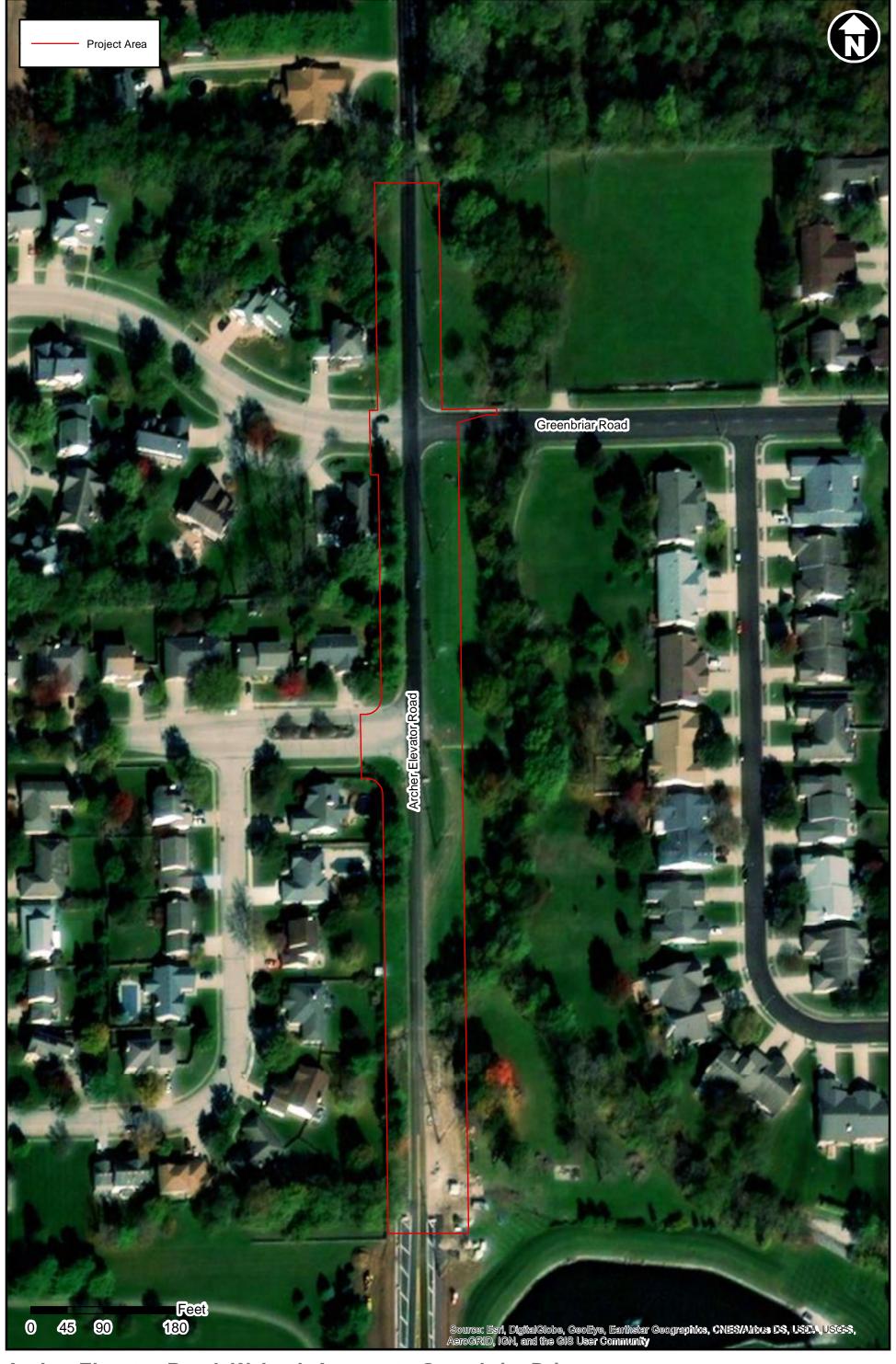














# CP for Franklin's Ground Squirrel Archer Elevator Rd – Wabash Ave to Greenbriar Dr.

ATTACHMENT B: PROJECT PLANS



# INDEX OF SHEETS

0

0

0

0

COVER SHEET GENERAL NOTES, MIXTURE REQUIREMENTS

& COMMITMENTS SUMMARY OF QUANTITIES TYPICAL SECTIONS

SCHEDULE OF QUANTITIES ALIGNMENT, TIES AND BENCHMARKS MAINTENANCE OF TRAFFIC - DETOUR PLANS

PLAN AND PROFILE SHEETS INTERSECTION DETAILS

LANDSCAPING AND EROSION CONTROL PLANS PAVEMENT MARKING AND SIGNING PLANS

LANDSCAPING DETAILS MISCELLANEOUS DETAILS

CROSS SECTIONS - ARCHER ELEVATOR ROAD

# STATE OF ILLINOIS CITY OF SPRINGFIELD

# PLANS FOR PROPOSED IMPROVEMENT FOR SURFACE TRANSPORTATION - URBAN F.A.U. ROUTE 8011 (ARCHER ELEVATOR ROAD)

# IDOT STANDARDS

000001-07	602402-01	701501-06
001006	602406-09	701502-09
280001-07	602411-06	701701-10
420001-09	602416-07	701801-06
424001-11	602601-06	701901-08
424016-05	602701-02	720001-01
424026-03	604001-04	720006-04
542301-03	604006-05	728001-01
542306-03	604036-03	780001-05
601001-05	606001-07	B.L.R. 17-4
602301-04	701001-02	B.L.R. 21-9
602306-03	701006-05	B.L.R. 22-7
602401-05	701301-04	

FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

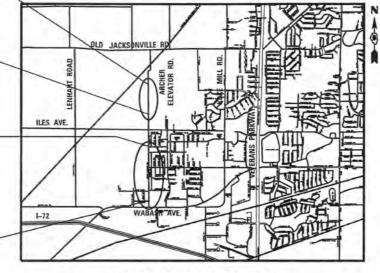
SECTION: 17-00431-02-PV PROJECT NO: 66WG (930) JOB NO: C-96-034-18 SANGAMON COUNTY

PROJECT ENDS (NORTH SECTION) ARCHER ELEVATOR RD. STA. 89 + 30.00

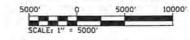
PROJECT BEGINS (NORTH SECTION) ARCHER ELEVATOR RD. STA. 76 + 22.84

PROJECT ENDS (SOUTH SECTION) ARCHER ELEVATOR RD. STA. 49 + 71.36

PROJECT BEGINS (SOUTH SECTION) ARCHER ELEVATOR RD. STA. 14 + 65.00



# LOCATION MAP



F.A.U. ROUTE 8011 (ARCHER ELEVATOR ROAD) DESIGN DESIGNATION: MINOR ARTERIAL (URBAN) DESIGN ADT = 9,700 DESIGN SPEED = 40 MPH LENGTH OF IMPROVEMENT = 4,813.52 FEET = 0.912 MILES

# Releasing For Bid Based on

LOCATION OF SECTION INDICATED THUS: -

License No. 184-000613

10/29/18

APPROVED October 20 18 Nutra Bodison CITY ENGINEER, SPRINGFIELD, ILLINOIS DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS REGION FOUR ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SANGAMON 79 1

CONTRACT NO. 93719

17-00431-02-PV

# UTILITIES

SANGAMON COUNTY WATER RECLAMATION DISTRICT 3017 N. EIGHTH STREET SPRINGFIELD, IL. 62707 ATTENTION: GREGG HUMPHREY, 217-528-0491

711 SOUTH DIRKSEN PARKWAY SPRINGFIELD, IL. 62703 ATTENTION: DAVE BLY 217-306-3759

A.I.G. 1640 E. HAZEL DELL SPRINGFIELD, IL. 62670 ATTENTION; JAMES DARR 217-789-8771

825 NORTH MACARTHUR SPRINGFIELD, IL. 62702 ATTENTION: RICK COMBS, 217-753-5187 (GAS)

CITY WATER, LIGHT & POWER- WATER DEPARTMENT 401 N. 11TH STREET SPRINGFIELD, IL. 62702 ATTENTION: MICHAEL JOHNSON 217-789-2323

CITY WATER, LIGHT & POWER- ELECTRIC DEPARTMENT 1008 EAST MILLER ST.
SPRINGFIELD, IL. 62702
ATTENTION: DAVID MIHELSIC 217-321-1373

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION

1-800-892-0123 OR 811

CONTRACT NO. 93719

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

### **GENERAL NOTES**

- 1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION ON APRIL 1, 2016; AND THE LATEST EDITION OF THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS."
- 2. WHERE SECTION OR SUB-SECTION STONES OR PROPERTY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE STONES OR MARKERS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL MONUMENTS AND PROPERTY MARKERS UNTIL AN AUTHORIZED AGENT OR LAND SURVEYOR HAS WITNESSED THEIR LOCATION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR RE-SETTING SAID MONUMENTS AND/OR PROPERTY MARKERS.
- 3. DEPRESS CURBS ACROSS ALL ENTRANCES, PER STD. 606001.
- 4. DOMESTIC BUFFALO BOXES AND METER VAULTS IN THE AREA WHERE THE IMPROVEMENTS ARE TO TAKE PLACE SHALL BE MOVED OR ADJUSTED, IF NECESSARY, BY THE CONTRACTOR.
- 5. THE LOCATIONS OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE THE LOCATIONS OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVE GROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER.
- 6. UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. CALL J.U.L.I.E. JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123 OR 811.
- 7. WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUTS WILL NOT BE PAID FOR SEPARATELY. COST OF SAW CUTS SHALL BE INCIDENTAL TO THE TYPE OF WORK ENCOUNTERED.
- 8. ONLY THOSE TREES INDICATED IN THE PLANS TO BE REMOVED SHALL BE REMOVED UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL PROTECT ALL REMAINING TREES FROM DAMAGE. ALL TREES AND SHRUBS INDICATED ON PLANS FOR REMOVAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- 9. ALL COORDINATES SHOWN ON THE PLANS ARE BASED ON NAD83 DATUM (STATE PLANE COORDINATES) AND ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON NAVD88 DATUM.
- 10. THE FOLLOWING HAVE BEEN USED IN CALCULATING THE PLAN QUANTITIES:

AGGREGATE:
- PUGGED AGGREGATE - ALL OTHER AGGREGATE

2.05 TONS/CULYD. 1.89 TONS/CU, YD.

BITUMINOUS MATERIALS:

ON PAVEMENT

0.05 LB/SQ. FT.

- INTERMEDIATE LIFTS (TACK COAT)

0.025 LB/SQ. FT.

- ON AGGREGATE SURFACE

0.25 LB/SQ. FT. 4 LBS./SQ.YD.

AGGREGATE (PRIME COAT) SEEDING FERTILIZER RATIO (NIT:PHOS:POT)

AGRICULTURAL GROUND LIMESTONE

90:90:90 | BS./AC. 2.00 TONS/AC.

- 11. DETECTABLE WARNINGS SHALL BE INSTALLED AT ALL LOCATIONS WHERE SIDEWALK CROSSES ENTRANCES IN ACCORDANCE WITH IDOT STD. 424026 REGARDLESS OF THE PERMANENT
- 12. PROPOSED SIDEWALKS ACROSS DRIVES SHALL MATCH THE DEPTH OF THE ADJACENT DRIVE. COST FOR ADDITIONAL MATERIAL SHALL BE INCLUDED IN UNIT PRICE FOR PCC SIDEWALK, 4", NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.37 OF THE STANDARD SPECIFICATIONS, POTENTIAL J.U.L.I.E. MEMBERS ACTIVE IN THE VICINITY OF THE PROJECT ARE LISTED ON THE COVER SHEET.
- 14. STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, JUNE 2014.
- 15. THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER ACCORDING TO ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL RE-ERECT THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO COMPENSATION WILL BE ALLOWED.
- 16. ITEMS TO BE REMOVED, INCLUDING BUT NOT LIMITED TO VEGETATION, TREES, STRUCTURES, PAVEMENT, CURBS AND GUTTERS, DRAINAGE STRUCTURES, UTILITIES, AND SIGNAGE ARE DESIGNATED ON THE PLAN DRAWINGS.

# **GENERAL NOTES**

- 17. GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE IN THE ORIGINAL STATE AS MUCH AREA OF TEMPORARY EASEMENTS AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER.
- 18. TEMPORARY EROSION CONTROL SEEDING IS INCLUDED IN THIS CONTRACT TO SEED NEW EARTH SLOPES DURING THE PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE TEMPORARY EROSION CONTROL SEEDING WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EARTH SLOPES AT THE TIME OF THEIR COMPLETION.
- 19. REMOVAL OF THE EXISTING OIL AND CHIP, HOT-MIX ASPHALT, BITUMINOUS AGGREGATE SURFACE, NOT ON A RIGID TYPE BASE, SHALL BE REMOVED AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION.
- 20. THE REMOVAL OF EXISTING HOT-MIX ASPHALT SURFACE ON A RIGID TYPE BASE SHALL BE REMOVED WITH THE BASE AS PAVEMENT REMOVAL.
- 21. THE CONTRACTOR SHALL TAKE REASONABLE PRECAUTIONS TO PROTECT PUBLIC AND PRIVATE PROPERTY. IF AT ANY TIME, HE/SHE DAMAGES OR DESTORYS PUBLIC OR PRIVATE PROPERTY, THE CONTRACTOR SHALL, AT HIS/HER OWN EXPENSE, RESTORE SUCH PROPERTY TO A CONDITION EQUAL TO THAT EXISTING BEFORE SUCH DAMAGE.
- 22. MODIFICATIONS TO EXISTING INLETS OR MANHOLES NECESSARY TO CONNECT PROPOSED STORM SEWER PIPE SHALL BE CONSIDERED INCLUDED IN THE COST OF THE PROPOSED STORM SEWER.
- 23. ALL TREE BRANCHES, TREE ROOTS, AND SHRUBS IN CONFLICT WITH THE CONSTRUCTION OF PROPOSED IMPROVEMENTS SHALL BE REMOVED OR TRIMMED BACK AT THE DISCRETION OF THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE FOR OTHER WORK, EXCEPT THAT PAYMENT WILL BE MADE FOR TREE PRUNING AS INDICATED IN THE SPECIAL PROVISIONS AND SHOWN IN THE PLANS.
- 24. ALL CONNECTIONS TO EXISTING DRAINAGE STRUCTURES OR FIELD ADJUSTMENTS TO PROPOSED DRAIMAGE STRUCTURES SHALL BE MADE BY DRILLING OR SAWCUTTING THE DRAIMAGE STRUCTURE, INSERTING THE PROPOSED PIPE AND GROUTING THE CONNECTION TO FORM A WATER TIGHT SEAL TO THE SATISFACTION OF THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE OF THE PROPOSED ITEM
- 25. ALL EXISTING SUMP PUMP DRAIN TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE CONNECTED TO PROPOSED DITCHES WHERE POSSIBLE. IF THE DRAIN TILE CANNOT BE CONNECTED TO PROPOSED DITCHES, THE DRAIN TILE SHALL BE CONNECTED TO PROPOSED STORM SEWER STRUCTURES AT THE DIRECTION OF THE ENGINEER AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

# COMMITMENTS

- IMPACTS ON TREES SHALL BE MITIGATED IN ACCORDANCE WITH IDOT DEPARTMENTAL POLICY D&E-18 PRESERVATION AND REPLACEMENT OF TREES. AS SUCH TREE REMOVALS SHOWN IN THE PLANS SHALL BE MARKED IN THE FIELD AND VERIFIED BY THE ENGINEER PRIOR TO REMOVAL BY THE CONTRACTOR. ALL TREES REMOVED SHALL BE REPLACED AT A 1:1 RATIO WITH THE SPECIES AND DISTRIBUTIONS AS SPECIFIED IN THE SUMMARY OF QUANTITIES. ALL REMAINING TREES SHALL BE PROTECTED BY THE CONTRACTOR FROM DAMAGE DUE TO THEIR OPERATIONS.
- THE CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH THE PROVISIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER PERMIT AND IMPLEMENT THE EROSION CONTROL PLAN INCLUDED IN THESE PLANS AND SPECIFIED HEREIN. AS SPECIFIED IN ARTICLE 107.23, THE ENGINEER MUST GIVE PRIOR APPROVAL BEFORE DISTRUBANCE OF ANY ADEA CAN BEFOR AREA CAN BEGIN.

### STRUCTURAL DESIGN INFORMATION (ARCHER ELEVATOR ROAD)

CLASS II STREET DESIGN TRAFFIC (2026): P.V. = 7.520S.U. = 320 M.U. = 160 T.F. = 0.986

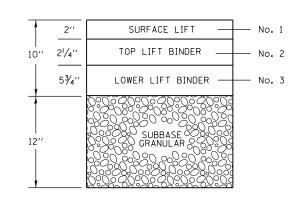
DESIGN STRAIN = 108 (MICROSTRAIN) = 520 ksi (PG 70-22)

SSR = FAIR

CONSTRUCT: 10" HMA (FULL DEPTH) ON 12" GRANULAR SUBGRADE

### MIXTURE REQUIREMENTS

MIXTORIA MARCHINA								
MIXTURE NUMBER:	No. 1	No. 2	No. 3					
LOCATION(S):	TOP 2" OF 10" HMA FULL-DEPTH PAVEMENT, TOP 2" OF HMA SHLD.	TOP 2 <sup>1</sup> /4" BINDER LIFT OF 10" HMA FULL-DEPTH PAVEMENT	BOTTOM LIFT OF 10" HMA FULL-DEPTH PAVEMENT BOTTOM 4" OF HMA SHOULDER					
MIXTURE USE(S):	BITUMINOUS CONCRETE SURFACE LIFT	TOP BINDER LIFT	LOWER BINDER LIFT					
AC/PG:	SBS PG 64-28	SBS PG 64-28	PG 64-22					
DESIGN AIR VOIDS:	4.0% @ Ndesign = 50	4.0% @ Ndesign = 50	4.0% @ Ndesign = 50					
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9 <b>.</b> 5	IL-19.0	IL-19.0					
FRICTION AGGREGATE:	MIX "D"	N/A	N/A					
QUALITY MANAGEMENT:	QC/QA	QC/QA	QC/QA					



### ARCHER ELEVATOR ROAD **BITUMINOUS LIFT DIAGRAM**

FILE NAME : DESIGNED -ВМВ REVISED USER NAME = Brian Bond SECTION COUNTY :\Springfield\070250l\Draw\Sheets\Cor ct\_2\C2-D6-Sht\_General Notes.dor ORAWN GLD/RAH REVISED CITY OF SPRINGFIFID **GENERAL NOTES, MIXTURE REQUIREMENTS AND COMMITMENTS** 8011 17-00431-02-PV SANGAMON 79 HECKED KL. REVISED **DEPARTMENT OF PUBLIC WORKS** CONTRACT NO. 93719 SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA. PLOT DATE = 1/18/2019 DATE 10/29/2018 REVISED FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT

				TOTAL	CONSTRUCTION CODE	
SP	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY -	0003	0028
*	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	353		353
*	20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	180		180
•	20101100	TREE TRUNK PROTECTION	EACH	59		59
•	20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	17		17
i	20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	49		49
	20101700	SUPPLEMENTAL WATERING	UNIT	131		131
	20200100	EARTH EXCAVATION	CU YD	17,909	14, 924	2, 985
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	300	250	50
	20800150	TRENCH BACKFILL	CU YD	1,286.0	1,072.0	214.
	21101505	TOPSOIL EXCAVATION AND PLACEMENT	CU YD	2, 946	2, 455	491
	25000200	SEEDING, CLASS 2	ACRE	4.75	4.00	0.75
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	431	359	72
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	431	359	72
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	431	359	72
	25000700	AGRICULTURAL GROUND LIMESTONE	TON	9.5	7. 9	1.6
	25100125	MULCH, METHOD 3	ACRE	4.75	4.00	0.75
	25100630	EROSION CONTROL BLANKET	SQ YD	2,600	2, 167	433
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	475	395	80
	28000305	TEMPORARY DITCH CHECKS	FOOT	264	264	
	28000400	PERIMETER EROSION BARRIER	FOOT	4, 499	4,499	

FILE NAME =	USER NAME = Brian Bond	DESIGNED	-	ВМВ	REVISED	-
L:\Springfield\070250l\Draw\Sheets\Contr	act_2\C2-D6-Sht_S00.dgn	DRAWN	-	GLD/RAH	REVISED	-
	PLOT SCALE = 100.0000 '/ in.	CHECKED	-	KLT	REVISED	-
	DLOT DATE - 10/20/2010	DATE	_	10/29/2019	DEVISED	_

SUMMARY OF QUANIT Archer Elevator Ro					
SCALE: N/A	SHEET NO.	OF	SHEETS	STA. N/A	

TO STA. N/A

		SUMMARY OF QUANTITIES	T			
SP	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL	CONSTRUCTION COI	
	0002 110		GW2 1	QUANTITY	0003	0028
	28000500	INLET AND PIPE PROTECTION	EACH	9	9	
					·	
	28000510	INLET FILTERS	EACH	59	59	
	28100105	STONE RIPRAP, CLASS A3	SQ YD	24	24	
	28100107	STONE RIPRAP, CLASS A4	SQ YD	121	121	
	28200200	FILTER FABRIC	SQ YD	121	121	
	31100910	SUBBASE GRANULAR MATERIAL, TYPE A 12"	SQ YD	27, 395	22,829	4,566
*	40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	636	636	
*	40201000	AGGREGATE FOR TEMPORART ACCESS	TON	636	636	
*	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	55, 578	46, 315	9, 263
	40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	11,118	9, 265	1,853
	40600990	TEMPORARY RAMP	SQ YD	157	157	
	40701881	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 10"	SQ YD	24,619	20, 516	4, 103
	42300200	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	SQ YD	69	69	
*	42400100	PORTLAND CEMENT CONCRETE SIDEWALK 4 INCH	SO FT	46, 722		46,722
	42400800	DETECTABLE WARNINGS	SQ FT	220		220
*	44000100	PAVEMENT REMOVAL	SQ YD	3,016	3,016	
*	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	550	550	
	44000600	SIDEWALK REMOVAL	SQ FT	604		604
*	48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	269	269	
	50104400	CONCRETE HEADWALL REMOVAL	EACH	2	2	
*	50105220	PIPE CULVERT REMOVAL	FOOT	366	366	1

FILE NAME =	USER NAME = Brian Bond	DESIGNED	-	ВМВ	REVISED	-
L:\Springfield\070250l\Draw\Sheets\Contr	act_2\C2-D6-Sht_S00.dgn	DRAWN	-	GLD/RAH	REVISED	-
	PLOT SCALE = 100.0000 ' / in.	CHECKED	-	KLT	REVISED	-
	PLOT DATE = 10/30/2018	DATE	_	10/29/2018	REVISED	_

SUMMARY OF QUANITITES ARCHER ELEVATOR ROAD					
SCALE: N/A	SHEET NO.	OF	SHEETS	STA. N/A	

TO STA. N/A

SUMMARY OF QUANTITIES  TOTAL CONSTRUCTION CO								
SP (	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	0003	0028		
	54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	2	2			
	54213672	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 27"	EACH	1	1			
	54213699	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 54"	EACH	1	1			
	54214719	PRECAST REINFORCED CONCRETE FLARED END SECTIONS - ELLIPTICAL, EQUIVALENT ROUND-SIZE 24"	EACH	2	2			
	54214731	PRECAST REINFORCED CONCRETE FLARED END SECTIONS - ELLIPTICAL, EQUIVALENT ROUND-SIZE 36"	EACH	1	1			
	54248510	CONCRETE COLLAR	CU YD	1.2	1.2			
	550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	1,609	1,609			
	550A0070	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	506	506			
	550A0090	STORM SEWERS, CLASS A, TYPE 1 18"	FOOT	609	609			
	550A0120	STORM SEWERS, CLASS A, TYPE 1 24"	FOOT	10	10			
	550A0130	STORM SEWERS, CLASS A, TYPE 1 27"	FOOT	21	21			
	550A0140	STORM SEWERS, CLASS A, TYPE 1 30"	FOOT	43	43			
	550A0200	STORM SEWERS, CLASS A, TYPE 1 54"	FOOT	23	23			
	550A0360	STORM SEWERS, CLASS A, TYPE 2 15"	FOOT	32	32			
	550A0380	STORM SEWERS, CLASS A, TYPE 2 18"	FOOT	484	484			
	550A0430	STORM SEWERS, CLASS A, TYPE 2 30"	FOOT	11	1 1			
	550A4000	STORM SEWERS, CLASS A, TYPE 1 EQUIVALENT ROUND-SIZE 18"	FOOT	19	19			
	550A4100	STORM SEWERS, CLASS A, TYPE 1 EQUIVALENT ROUND-SIZE 24"	FOOT	887	887			
	550A4200	STORM SEWERS, CLASS A, TYPE 1 EQUIVALENT ROUND-SIZE 27"	FOOT	228	228			
	550A4500	STORM SEWERS, CLASS A, TYPE 1 EQUIVALENT ROUND-SIZE 36"	FOOT	14	14			

FILE NAME =	USER NAME = Brian Bond	DESIGNED	-	ВМВ	REVISED	-
L:\Springfield\070250l\Draw\Sheets\Contr	act_2\C2-D6-Sht_S00.dgn	DRAWN	-	GLD/RAH	REVISED	-
	PLOT SCALE = 100.0000 ' / in.	CHECKED	-	KLT	REVISED	-
	PLOT DATE = 10/30/2018	DATE	_	10/29/2018	REVISED	_

SUMMARY OF QUANITITES ARCHER ELEVATOR ROAD								
SCALE: N/A	SHEET NO.	OF	SHEETS	STA. N/A	TO STA. N/A			

		SUMMARY OF QUANTITIES				
SP	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUC	FION CODE
				QUANTITI	0003	0028
	55100500	STORM SEWER REMOVAL 12"	FOOT	11	11	
*	59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	25	25	
*	60108100	PIPE UNDERDRAINS 4" (SPECIAL)	FOOT	250	250	
*	60108200	PIPE UNDERDRAINS 6" (SPECIAL)	FOOT	250	250	
	60218400	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	2	2	
	60218500	MANHOLES, TYPE A, 4'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	14	14	
	60221100	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	4	4	
	60221200	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	5	5	
	60223800	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	5	5	
	60223810	MANHOLES, TYPE A, 6'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	3	3	
	60224447	MANHOLES, TYPE A, 7'-DIAMETER, TYPE 3 FRAME AND GRATE	EACH	1	1	
	60224459	MANHOLES, TYPE A, 8'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1	
	60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	23	23	
	60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	2	2	
	60240220	INLETS, TYPE B, TYPE 3 FRAME AND GRATE	EACH	10	10	
*	60255500	MANHOLES TO BE ADJUSTED	EACH	1		1
*	60266600	VALVE BOXES TO BE ADJUSTED	EACH	16	13	3
	60500060	REMOVING INLETS	EACH	1	1	
	60604400	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18	FOOT	9,079	9,079	
*	61100500	EXPLORATION TRENCH 52" DEPTH	FOOT	500	500	
	01100300	LALEGRATION THENCH 32 DELTH	F 001	300	300	

FILE NAME =	USER NAME = Brian Bond	DESIGNED	-	BMB	REVISED	-
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	PLOT SCALE = 100.0000 '/ in.	CHECKED	-	KLT	REVISED	-
	PLOT DATE = 10/30/2018	DATE	_	10/29/2018	REVISED	-

			Y OF QU ELEVATO	ANITITES R ROAD
SHEET	NO.	OF	SHEETS	STA.

TO STA.

SCALE:

		SUMMARY OF QUANTITIES			0.0110==111=	
SP	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY -	CONSTRUCT	ION CODE
				QUANTITI	0003	0028
*	61100605	MISCELLANEOUS CONCRETE	CU YD	4	4	
*	61101007	STORM SEWERS PROTECTED, CLASS A, 6"	FOOT	50	50	
*	61101009	STORM SEWERS PROTECTED, CLASS A, 8"	FOOT	50	50	
*	61139900	STORM SEWERS (SPECIAL), 6"	FOOT	50	50	
*	61140000	STORM SEWERS (SPECIAL), 8"	FOOT	50	50	
	67100100	MOBILIZATION	LSUM	1.0	0.9	0.1
*	70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	1, 110	1,110	
*	10300210	TEMPORARI FAVEMENT MARKING LETTERS AND STMBOLS	30 F1	1,110	1, 110	
*	70300230	TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	22, 472	22, 472	
*	70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	985	985	
*	70300250	TEMPORARY PAVEMENT MARKING - LINE 8"	FOOT	628	628	
*	70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	227	227	
*	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	140	140	
	72000100	SIGN PANEL - TYPE 1	SQ FT	30	25	5
*	72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	16	15	1
	72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	9	9	
	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	15	15	
	78000300	THERMOPLASTIC PAVEMENT MARKING - LINE 5"	FOOT	22, 472	13, 422	9, 050
	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	985	985	
	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	628	628	
	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	227	227	

ı	FILE NAME =	USER NAME = Brian Bond	DESIGNED	-	ВМВ	REVISED	-
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		PLOT SCALE = 100.0000 ' / in.	CHECKED	-	KLT	REVISED	-
		DLOT DATE - 10/20/2010	DATE		10 /20 /2019	DEVICED	

		ANITITES R ROAD			
SHEET	NO.	OF	SHEETS	STA.	TO STA.

SCALE:

		SUMMARY OF QUANTITIES				
SP	CODE NO.	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	CONSTRUCT	ION CODE
				QUANTITI	0003	0028
	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	140	140	
	78008200	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS	SQ FT	1,110	1,004	106
*	B2001166	TREE, CERCIS CANADENSIS (EASTERN REDBUD), 6' HEIGHT, CLUMP FORM, BALLED AND BURLAPPED	EACH	27		27
*	D2000148	EVERGREEN, ABIES CONCOLOR (WHITE FIR), 4' HEIGHT, BALLED AND BURLAPPED	EACH	17		17
*	X0322936	REMOVE EXISTING FLARED END SECTION	EACH	2	2	
	X0322336	NEMOVE EXISTING FLARED END SECTION	EACH	2	2	
*	X0322939	RELOCATE EXISTING FLARED END SECTION	EACH	3	2	1
*	X0323265	REMOVE EXISTING RIPRAP	SQ YD	114	114	
*	X0323389	STORM SEWER CONNECTION	EACH	2	2	
	X0325402	MODIFY SPRINKLER SYSTEM	LSUM	1		1
	70323102	MODIL TO MINKELLY STOTEM	2001	1		
*	X0325528	REMOVE & REINSTALL LIGHTING EQUIPMENT	LSUM	1	1	
*	X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SO FT	3, 478	3, 478	
*	X6026050	SANITARY MANHOLES TO BE ADJUSTED	EACH	8	5	3
*	X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	LSUM	1.0	0.9	0. 1
*	X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	11,732	11,732	
*	Z0013798	CONSTRUCTION LAYOUT	LSUM	1.0	0.9	0.1
*	Z0016702	DETOUR SIGNING	LSUM	1	1	
*	Z0033700	LONGITUDINAL JOINT SEALANT	FOOT	19, 256	19, 256	
				·		
*	Z0054404	ROCK FILL - EMBANKMENT	CU YD	300	300	
	Z0056608	STORM SEWER (WATER MAIN REQUIREMENTS) 12 INCH	FOOT	315	315	
*	Z0056610	STORM SEWER (WATER MAIN REQUIREMENTS) 15 INCH	FOOT	208	208	

FILE NAME =	USER NAME = Brian Bond	DESIGNED	-	BMB	REVISED	-
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	PLOT SCALE = 100.0000 '/ in.	CHECKED	-	KLT	REVISED	-
	PLOT DATE = 10/30/2018	DATE	-	10/29/2018	REVISED	-

			Y OF QU ELEVATO		
SHEET	NO.	OF	SHEETS	STA.	

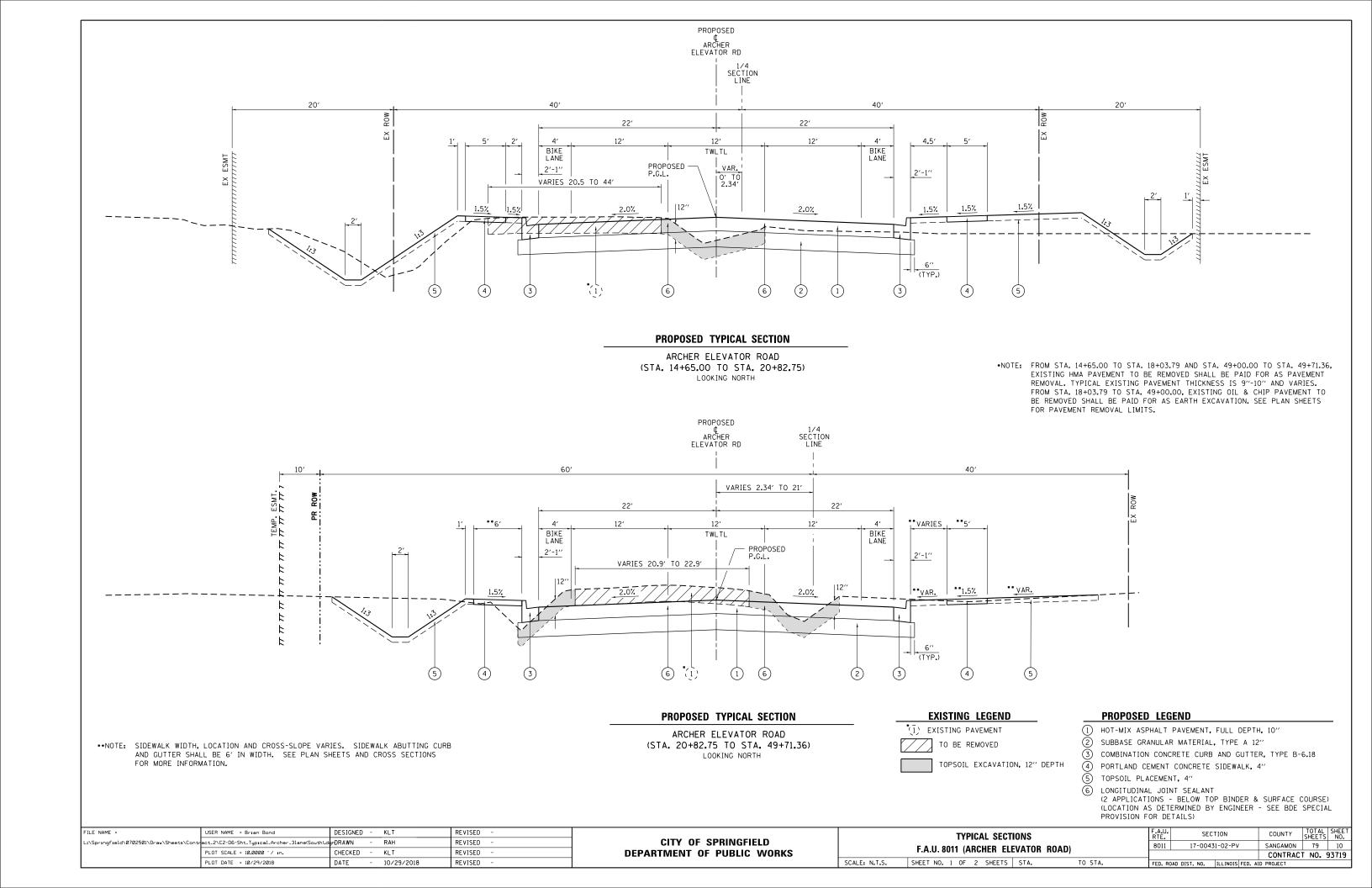
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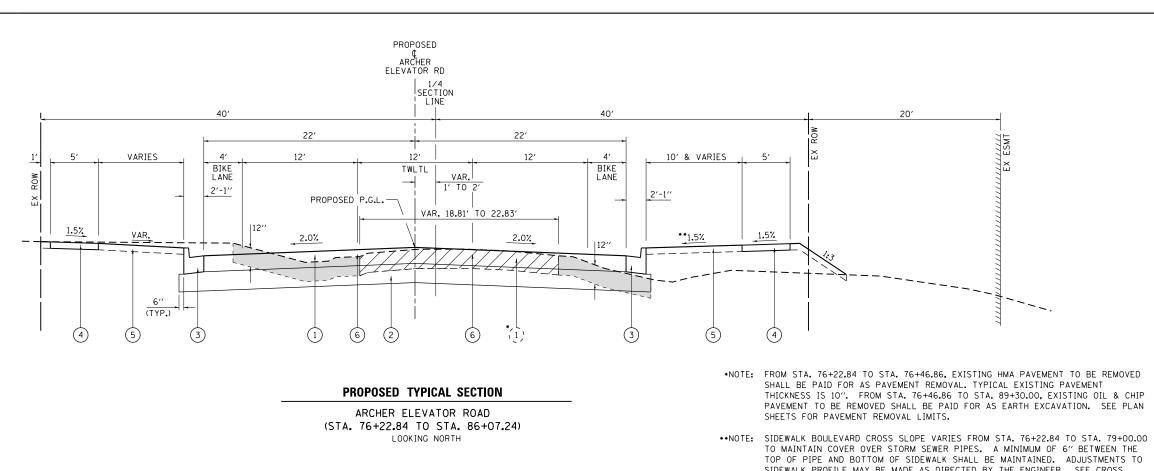
SCALE:

													CONCT	RUCTION (	ODE.
SP.	CODE NO.					ITEM	M DESCRIP	TION			UNIT	TOTAL QUANTITY			
													0003		0028
*	Z0056618	STORM SEWER (W	ATER MAIN REQ	UIREMENTS)	27 INCH						FOOT	178	178		
*	Z0056631	STORM SEWER (W	ATER MAIN REQ	UIREMENTS)	EQUIVALENT ROUN	D-SIZE 24 IN	NCH				FOOT	274	274		
*	Z0076600	TRAINEES									HOUR				
*	Z0076604	TRAINEES TRAINI	NG PROGRAM GF	RADUATE							HOUR				
*	Z0076870	UNDERDRAIN CON	NECTION TO ST	RUCTURE							EACH	5	5		
	20010010	ONDENDINATIV CON	142011011 10 31	TOO TOTAL							EAGIT	3			
											1				
* SF	= SEE SPECIAL	PROVISION									1				
	USER NAME = Bo	ian Bond	DESIGNED - BMB DRAWN - GLD/		REVISED - REVISED -			CITY OF SP	RINGFIFI D		Y OF QUANTITIES			SECTION	COUNTY
' /n.am/2µ	PLOT SCALE = 10		CHECKED - KLT		REVISED -		DEP	CITY OF SP ARTMENT OF F	HIRLIC WURKS		<b>ELEVATOR ROAD</b>		8011 17	-00431-02-PV	SANGAMON CONTRACT

FILE NAME =

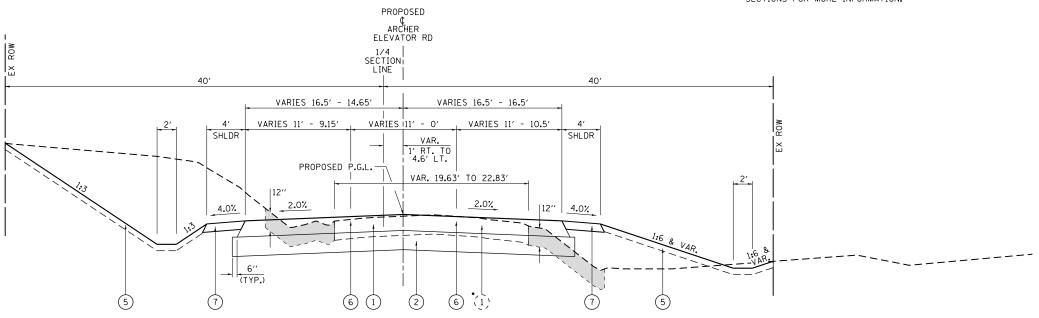
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\*NOTE: FROM STA. 76+22.84 TO STA. 76+46.86, EXISTING HMA PAVEMENT TO BE REMOVED SHALL BE PAID FOR AS PAVEMENT REMOVAL. TYPICAL EXISTING PAVEMENT THICKNESS IS 10". FROM STA. 76+46.86 TO STA. 89+30.00, EXISTING OIL & CHIP PAVEMENT TO BE REMOVED SHALL BE PAID FOR AS EARTH EXCAVATION. SEE PLAN

SIDEWALK PROFILE MAY BE MADE AS DIRECTED BY THE ENGINEER. SEE CROSS SECTIONS FOR MORE INFORMATION.



# PROPOSED TYPICAL SECTION

ARCHER ELEVATOR ROAD (STA. 86+07.24 TO STA. 89+30.00) LOOKING NORTH

# **EXISTING LEGEND**

(1) EXISTING PAVEMENT TO BE REMOVED

TOPSOIL EXCAVATION, 12" DEPTH

# PROPOSED LEGEND

- 1 HOT-MIX ASPHALT PAVEMENT, FULL DEPTH, 10"
- 2 SUBBASE GRANULAR MATERIAL, TYPE A 12"
- (3) COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.18 (4) PORTLAND CEMENT CONCRETE SIDEWALK, 4"
- 5 TOPSOIL PLACEMENT, 4"
- LONGITUDINAL JOINT SEALANT (2 APPLICATIONS - BELOW TOP BINDER & SURFACE COURSE) (LOCATION AS DETERMINED BY ENGINEER - SEE BDE SPECIAL PROVISION FOR DETAILS)
- (7) HOT-MIX ASPHALT SHOULDER, 6"

	USER NAME = Brian Bond	DESIGNED - KLT	REVISED -		TYPICAL SECTIONS	RTE.	SECTION	COUNTY	SHEETS	NO.
L:\Springfield\070250l\Draw\Sheets\Contr	act_2\C2-D6-Sht_Typical_Archer_3lane(North).d		REVISED -	CITY OF SPRINGFIELD	F.A.U. 8011 (ARCHER ELEVATOR ROAD)	8011	17-00431-02-PV	SANGAMON	79	11
	PLOT SCALE = 10.0000 '/ in.	CHECKED - KLT	REVISED -	DEPARTMENT OF PUBLIC WORKS	F.A.U. BUIT (ARCHER ELEVATOR RUAD)			CONTRAC	CT NO.	93719
	PLOT DATE = 10/29/2018	DATE - 10/29/2018	REVISED -		SCALE: N.T.S. SHEET NO. 2 OF 2 SHEETS STA. TO STA.	FED. R	DAD DIST. NO.   ILLINOIS FED.	AID PROJECT		

### **PAVING**

STATIC	IN/ L 0	CATION	SUBBASE GRANULAR MATERIAL, TYPE A 12"	BITUMINOUS MATERIALS (PRIME COAT)	BITUMINOUS MATERIALS (TACK COAT)	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 10"	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH	HOT-MIX ASPHALT SHOULDERS, 6"	PAVEMENT REMOVAL	TEMPORARY RAMP	LONGITUDINAL JOINT SEALANT
			(SQ YD)	(POUND)	(POUND)	(SQ YD)	(SQ YD)	(SQ YD)	(SQ YD)	(SQ YD)	(F00T)
ARCHER ELE	VATO	R ROAD									
14+65.00	-	17+00.00	1,285	2,586	518	1,149			945		941
17+00.00	-	23+00.00	3, 595	7, 260	1,452	3, 227			693		2,400
23+00.00	-	29+00.00	3, 280	6,600	1,320	2, 934					2,400
29+00.00	-	35+00.00	3, 280	6, 600	1,320	2, 934					2,400
35+00.00	-	41+00.00	3, 690	7,533	1,507	3, 348			229		2,400
41+00.00	-	47+00.00	3, 280	6,600	1,320	2, 934					2,400
47+00.00	-	49+71.36	1,835	3, 772	755	1,676			389		1,086
76+22.84	-	80+00.00	2, 125	4, 149	830	1,844	69		65		1,509
80+00.00	1	85+00.00	2, 960	6,028	1,206	2,679			337		2,000
85+00.00	-	89+30.00	2,065	4, 450	890	1,894		269	358	157	1,720
Т	OTAL	S	27, 395	55, 578	11,118	24,619	69	269	3,016	157	19, 256

# COMBINATION CONCRETE CURB AND GUTTER

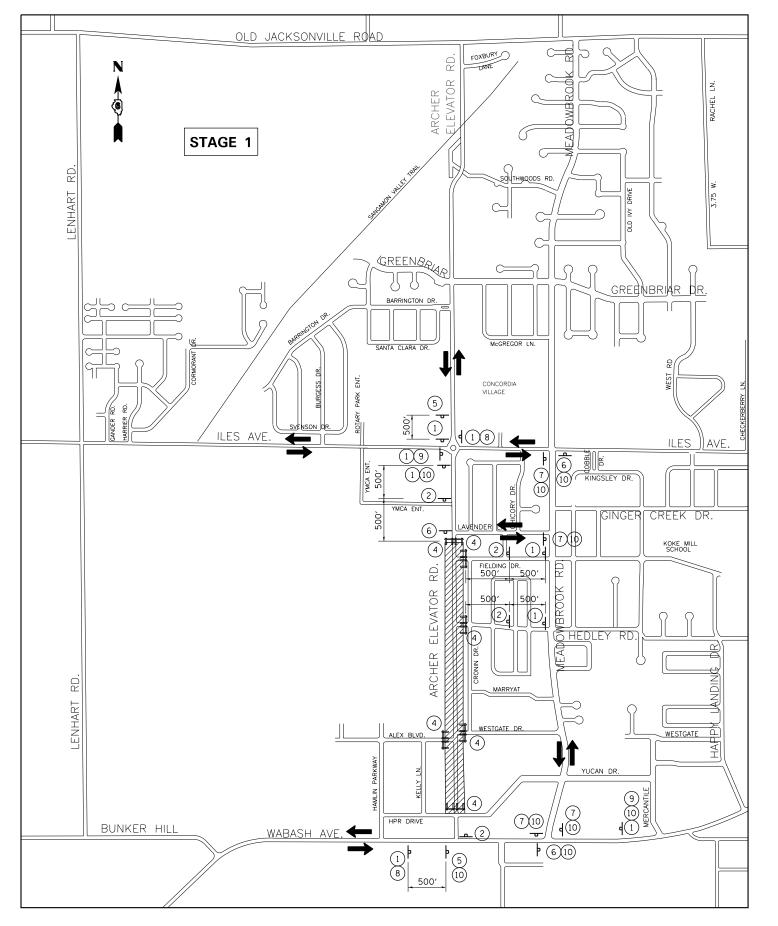
STATIO	)N/L0	CATION	COMBINATION CURB AND GUTTER REMOVAL	COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.18		
			(FOOT)	(F00T)		
ARCHER ELE	VATO	R ROAD				
14+65.00	-	17+00.00	3	471		
17+00.00	-	23+00.00	15	1,279		
23+00.00				1,200		
29+00.00				1, 200		
35+00.00	-	41+00.00	116	1, 181		
41+00.00	+00.00 - 47+			1,200		
47+00.00	-	49+71.36	111	542		
76+22.84	76+22.84 - 80+00.00			755		
80+00.00	-	85+00.00	122	973		
85+00.00	-	89+30.00	183	278		
7	ΓΟΤΑL	S	550	9,079		

# **EARTHWORK**

				FC	OR INFORMATION ON	LY	F	OR INFORMATION ON	ILY
STATION/LOCATION		EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE		EARTHWORK BALANCE WASTE (+) SHORTAGE (-)	TOPSOIL EXCAVATION	TOPSOIL PLACEMENT	TOPSOIL BALANCE WASTE (+) SHORTAGE (-)	
		(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	(CU YD)	
ARCHER ELEVATOR ROAD		R ROAD							
14+65.00	-	17+00.00	229	172	636	-464	133	141	-8
17+00.00	-	23+00.00	2,699	2,024	648	1,376	354	302	52
23+00.00	-	29+00.00	2,679	2,009	1 4 4	1,865	296	220	76
29+00.00	-	35+00.00	2, 111	1,583	111	1,472	476	207	269
35+00.00	-	41+00.00	2, 254	1,691	205	1,486	283	229	54
41+00.00	-	47+00.00	2, 930	2, 198	99	2,099	226	319	-93
47+00.00	-	49+71.36	1,372	1,029	38	991	88	104	-16
76+22.84	-	80+00.00	555	416	806	-390	380	141	239
80+00.00	-	85+00.00	1,269	952	528	424	423	148	275
85+00.00	-	89+30.00	1,811	1, 358	187	1, 171	287	176	111
TOTALS		17, 909	13, 432	3, 402	10,030	2, 946	1,987	959	

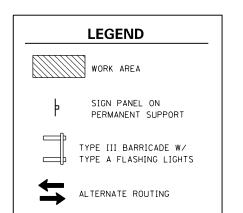
- \* ASSUMED SHRINKAGE FACTOR IS 25%. EARTH EXCAVATION TO BE USED AS EMBANKMENT = EARTH EXCAVATION X 75%. EARTHWORK BALANCE = [ (EARTH EXCAVATION X 0.75) EMBANKMENT ].
- \*\* EARTH EXCAVATION AND EMBANKMENT VOLUMES ARE CALCULATED AFTER TOPSOIL EXCAVATION HAS BEEN COMPLETED. TOPSOIL WILL BE USED TO COVER THE TOP 4" OF THE AREAS TO BE SEEDED. EXCESS TOPSOIL WILL NOT BE NEEDED FOR EMBANKMENT AND WILL BE REMOVED FROM THE SITE.
- \*\*\* TOPSOIL EXCAVATION AND TOPSOIL PLACEMENT TO BE PAID FOR AS TOPSOIL EXCAVATION AND PLACEMENT. SEPARATE TOPSOIL EXCAVATION AND PLACEMENT QUANTITIES AS WELL AS TOPSOIL BALANCE SHOWN ARE FOR INFORMATION ONLY.

FILE NAME =	USER NAME = Brian Bond	DESIGNED - BMB	REVISED -		SCHEDULE OF QUANTITIES	F.A.U. SECTION	COUNTY TOTAL SHEET SHEET NO.
L:\Springfield\070250l\Draw\Sheets\Cont	act_2\C2-D6-Sht_SCHEDULES.dgn	DRAWN - GLD/RAH	REVISED -	CITY OF SPRINGFIELD	ARCHER ELEVATOR ROAD	8011 17-00431-02-PV	SANGAMON 79 12
	PLOT SCALE = 100.0000 '/ in.	CHECKED - KLT	REVISED -	DEPARTMENT OF PUBLIC WORKS	ANUNCH ELEVATOR NUAD	'	CONTRACT NO. 93719
	PLOT DATE = 10/29/2018	DATE - 10/29/2018	REVISED -		SCALE: N/A SHEET NO. OF SHEETS STA. N/A TO STA. N/A	FED. ROAD DIST. NO. ILLINOIS FED. AI	



# MAINTENANCE OF TRAFFIC GENERAL NOTES

- 1.) ALL SIGNING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED APRIL 1, 2016, THE DETAILS IN THESE PLANS AND THE LATEST EDITION OF THE STATE OF ILLINOIS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- 2.) THE ENGINEER SHALL BE NOTIFIED IN WRITING AT LEAST TWO WEEKS PRIOR TO THE DAY THAT ANY ROAD IS TO BE CLOSED OR RE-OPENED TO THE PUBLIC. THE ENGINEER WILL COORDINATE WITH THE CITY AND ANY APPROPRIATE LOCAL AGENCIES.
- 3.) THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER THE NAMES AND PHONE NUMBERS OF HIS REPRESENTATIVES ON THE CONSTRUCTION SITE AND HIS REPRESENTATIVES RESPONSIBLE FOR THE DETOUR SIGNING AND MAINTENANCE OF TRAFFIC PRIOR TO THE START OF WORK.
- 4.) LONGITUDINAL DIMENSIONS SHOWN ON THESE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- 5.) THE ROAD SHALL NOT BE CLOSED UNTIL ALL SIGNING IS ERECTED IN ACCORDANCE WITH THE DETOUR PLAN FOR THAT STAGE AND SIGNING HAS BEEN INSPECTED AND APPROVED BY THE ENGINEER.
- 6.) ALL EXISTING SIGNING THAT IS NOT APPLICABLE WHILE THE ROAD CLOSURE IS IN EFFECT SHALL BE REMOVED OR COVERED BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, (SPECIAL).
- 7.) AS A MINIMUM, ALL AMBER FLASHING LIGHTS THAT ARE REQUIRED FOR THE CLOSURE SIGNAGE SHALL MEET THE REQUIREMENTS FOR TYPE A-LOW INTENSITY FLASHING LIGHTS PER ARTICLE 1106.02(a) OF THE STANDARD SPECIFICATIONS. ALL LIGHTS SHALL OPERATE DURING HOURS OF DARKNESS. ONLY LIGHTS THAT HAVE BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND THE CITY OF SPRINGFIELD SHALL BE USED.
- 8.) THE TYPE III BARRICADES USED AT POINTS OF CLOSURE TO THRU TRAFFIC ONLY SHALL NOT EXCEED 8 FEET IN WIDTH FOR A SINGLE APPROACH LANE. ALL BARRICADES AT THESE LOCATIONS SHALL HAVE REFLECTORIZED STRIPING ON BOTH SIDES OF THE BARRICADE.
- 9.) THE "ROAD CLOSED" SIGN ON A TYPE III BARRICADE SHALL BE MOUNTED ACCORDING TO STANDARD 701901.
- 10.) CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IMMEDIATELY BEHIND THE TYPE III BARRICADES DURING NON-WORKING HOURS. IN ANY EVENT, ARTICLES 701 THRU 703 OF THE STANDARD SPECIFICATIONS SHALL APPLY.
- 11.) THE CONTRACTOR SHALL COORDINATE UNINTERRUPTED MAIL SERVICE DURING CONSTRUCTION OPERATIONS.



# **STAGE 1 NOTES**

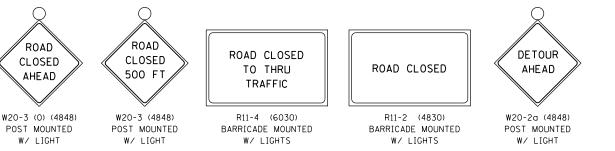
- 1.) ARCHER ELEVATOR ROAD FROM NORTH OF HPR/YUCAN DRIVE INTERSECTION TO NORTH OF FIELDING LANE CLOSED TO TRAFFIC DURING THIS STAGE.
- 2.) ARCHER ELEVATOR ROAD SHALL BE SUBSTANTIALLY COMPLETE AND OPEN TO TWO-WAY TRAFFIC, INCLUDING CONSTRUCTION OF THE FINAL HMA SURFACE, BY NOVEMBER 25, 2019.
- 3.) PRIOR TO INITIATING STAGE 2, ALL STAGE 1 CONSTRUCTION SHALL BE COMPLETED AND DETOUR SIGNING AND TRAFFIC CONTROL SHALL BE REMOVED.

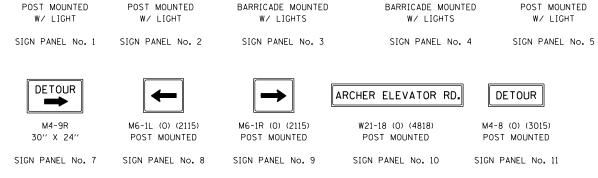
DETOUR

M4-9L

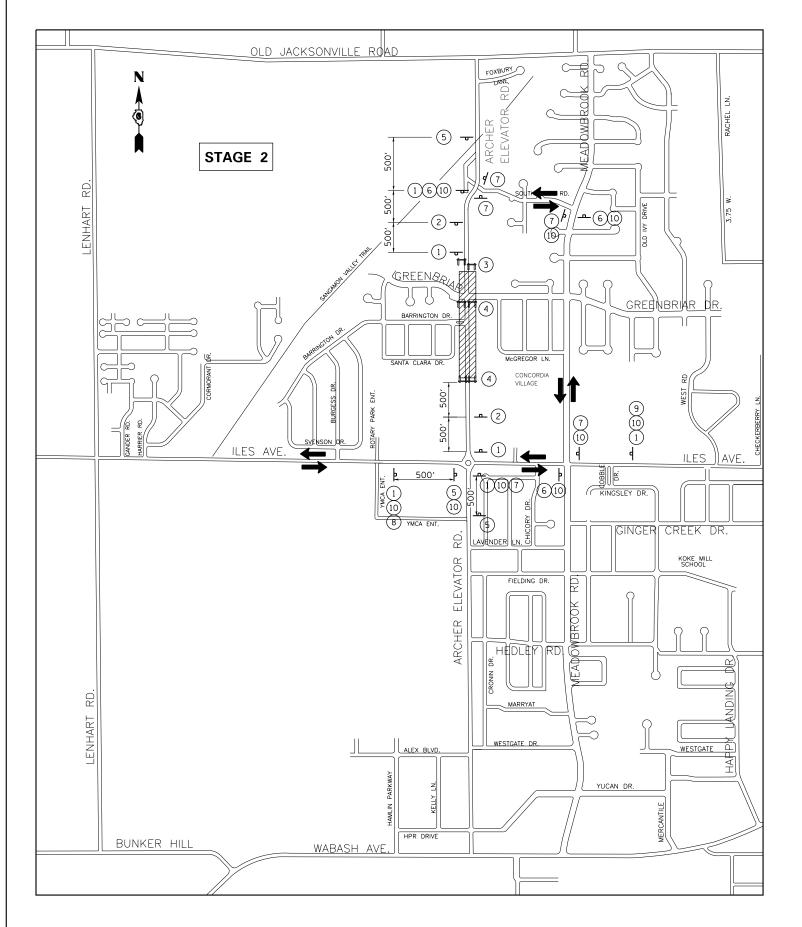
30" X 24"

SIGN PANEL No. 6



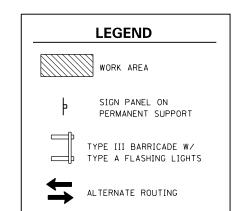


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# MAINTENANCE OF TRAFFIC GENERAL NOTES

- 1.) ALL SIGNING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED APRIL 1, 2016, THE DETAILS IN THESE PLANS AND THE LATEST EDITION OF THE STATE OF ILLINOIS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- 2.) THE ENGINEER SHALL BE NOTIFIED IN WRITING AT LEAST TWO WEEKS PRIOR TO THE DAY THAT ANY ROAD IS TO BE CLOSED OR RE-OPENED TO THE PUBLIC. THE ENGINEER WILL COORDINATE WITH THE CITY AND ANY APPROPRIATE LOCAL AGENCIES.
- 3,) THE CONTRACTOR SHALL SUPPLY TO THE ENGINEER THE NAMES AND PHONE NUMBERS OF HIS REPRESENTATIVES ON THE CONSTRUCTION SITE AND HIS REPRESENTATIVES RESPONSIBLE FOR THE DETOUR SIGNING AND MAINTENANCE OF TRAFFIC PRIOR TO THE START OF WORK.
- 4.) LONGITUDINAL DIMENSIONS SHOWN ON THESE PLANS MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- 5.) THE ROAD SHALL NOT BE CLOSED UNTIL ALL SIGNING IS ERECTED IN ACCORDANCE WITH THE DETOUR PLAN FOR THAT STAGE AND SIGNING HAS BEEN INSPECTED AND APPROVED BY THE ENGINEER.
- 6.) ALL EXISTING SIGNING THAT IS NOT APPLICABLE WHILE THE ROAD CLOSURE IS IN EFFECT SHALL BE REMOVED OR COVERED BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, (SPECIAL).
- 7.) AS A MINIMUM, ALL AMBER FLASHING LIGHTS THAT ARE REQUIRED FOR THE CLOSURE SIGNAGE SHALL MEET THE REQUIREMENTS FOR TYPE A-LOW INTENSITY FLASHING LIGHTS PER ARTICLE 1106.02(g) OF THE STANDARD SPECIFICATIONS. ALL LIGHTS SHALL OPERATE DURING HOURS OF DARKNESS. ONLY LIGHTS THAT HAVE BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND THE CITY OF SPRINGFIELD SHALL BE USED.
- 8.) THE TYPE III BARRICADES USED AT POINTS OF CLOSURE TO THRU TRAFFIC ONLY SHALL NOT EXCEED 8 FEET IN WIDTH FOR A SINGLE APPROACH LANE. ALL BARRICADES AT THESE LOCATIONS SHALL HAVE REFLECTORIZED STRIPING ON BOTH SIDES OF
- 9.) THE "ROAD CLOSED" SIGN ON A TYPE III BARRICADE SHALL BE MOUNTED ACCORDING TO STANDARD 701901.
- 10.) CONSTRUCTION EQUIPMENT SHALL NOT BE PARKED IMMEDIATELY BEHIND THE TYPE III BARRICADES DURING NON-WORKING HOURS. IN ANY EVENT, ARTICLES 701 THRU 703 OF THE STANDARD SPECIFICATIONS SHALL APPLY.
- 11.) THE CONTRACTOR SHALL COORDINATE UNINTERRUPTED MAIL SERVICE DURING CONSTRUCTION OPERATIONS.



### STAGE 2 NOTES

- 1.) ARCHER ELEVATOR ROAD FROM SOUTH OF BARRINGTON DRIVE TO THE SOUTH SIDE OF GREENBRIAR DRIVE INTERSECTION SHALL BE CLOSED TO ALL TRAFFIC.
- 2,) ARCHER ELEVATOR ROAD FROM GREENBRIAR DRIVE TO THE NORTH PROJECT LIMITS SHALL BE CLOSED TO THRU TRAFFIC ONLY.
- 3.) ACCESS TO GREENBRIAR DRIVE WEST OF ARCHER ELEVATOR ROAD SHALL BE MAINTAINED DURING STAGE 2 CONSTRUCTION.
- 3.) ARCHER ELEVATOR ROAD SHALL NOT REMAIN CLOSED TO TRAFFIC DURING A WINTER SHUTDOWN. PRIOR TO RE-OPENING THE ROAD TO TWO-WAY TRAFFIC, THE TOP LIFT OF HMA BINDER SHALL BE CONSTRUCTED AND TEMPORARY PAVEMENT MARKING INSTALLED. DETOUR SIGNING THAT IS NOT APPLICABLE OVER A WINTER SHUTDOWN SHALL BE REMOVED OR COVERED BY THE CONTRACTOR.









SIGN PANEL No. 4





SIGN PANEL No. 6

W/ LIGHT

SIGN PANEL No. 1

POST MOUNTED W/ LIGHT SIGN PANEL No. 2

POST MOUNTED

R11-4 (6030) BARRICADE MOUNTED W/ LIGHTS

SIGN PANEL No. 3

BARRICADE MOUNTED W/ LIGHTS

POST MOUNTED W/ LIGHT

SIGN PANEL No. 5

M4-9L 30" X 24"



M4-9R

30" X 24"





SCALE: N/A SHEET NO.



ARCHER ELEVATOR RD.

DETOUR

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POST MOUNTED

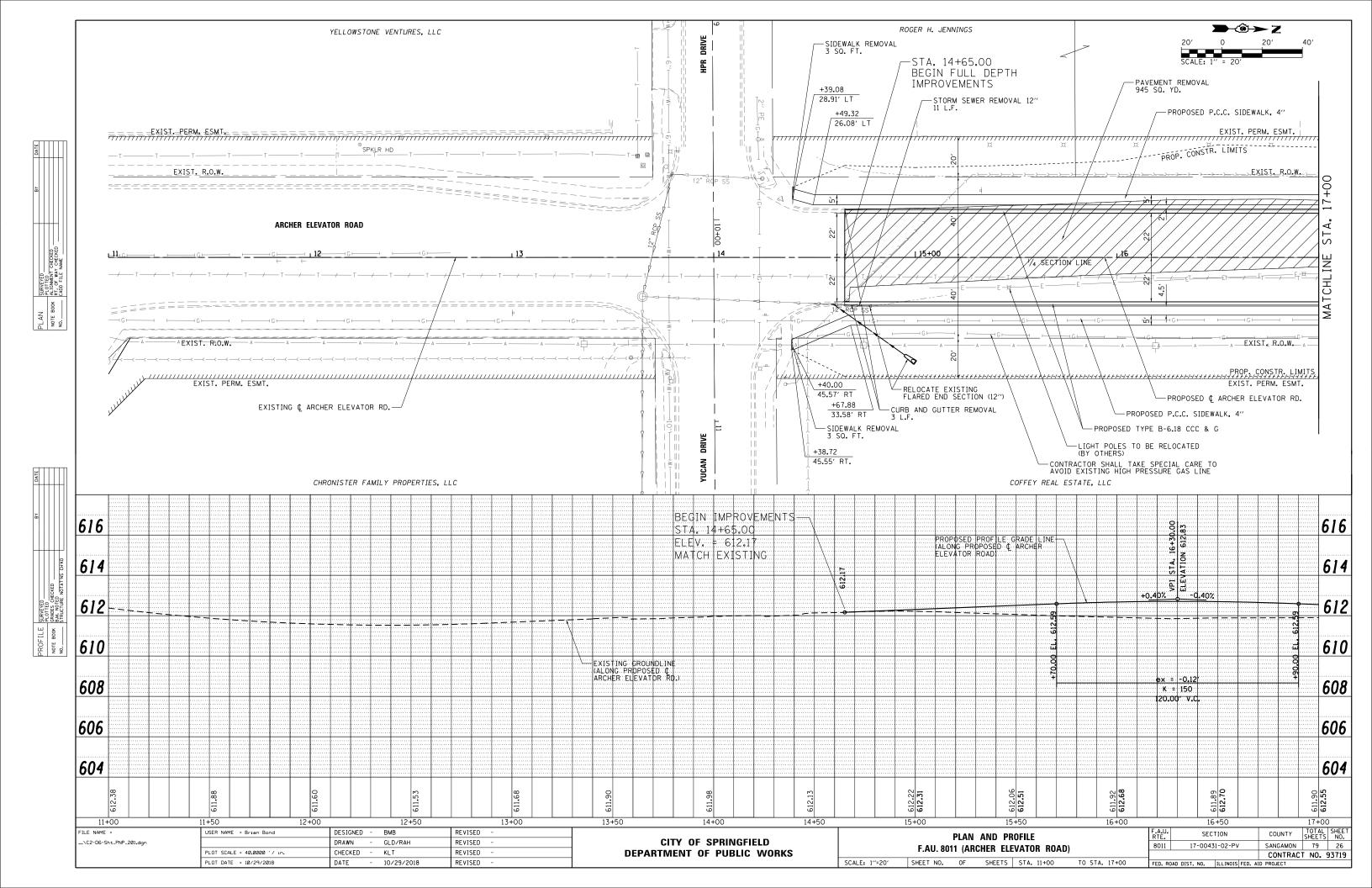
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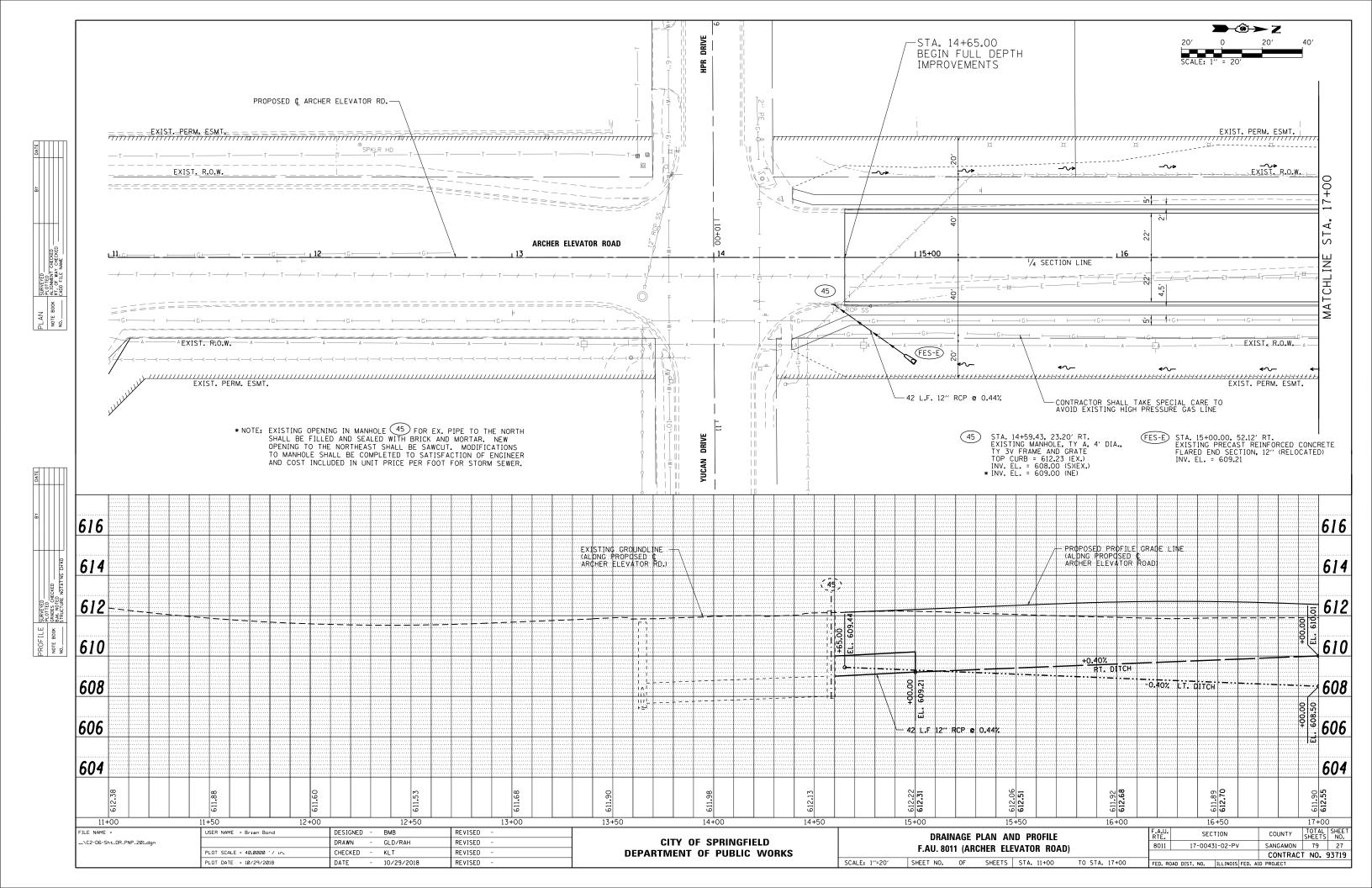
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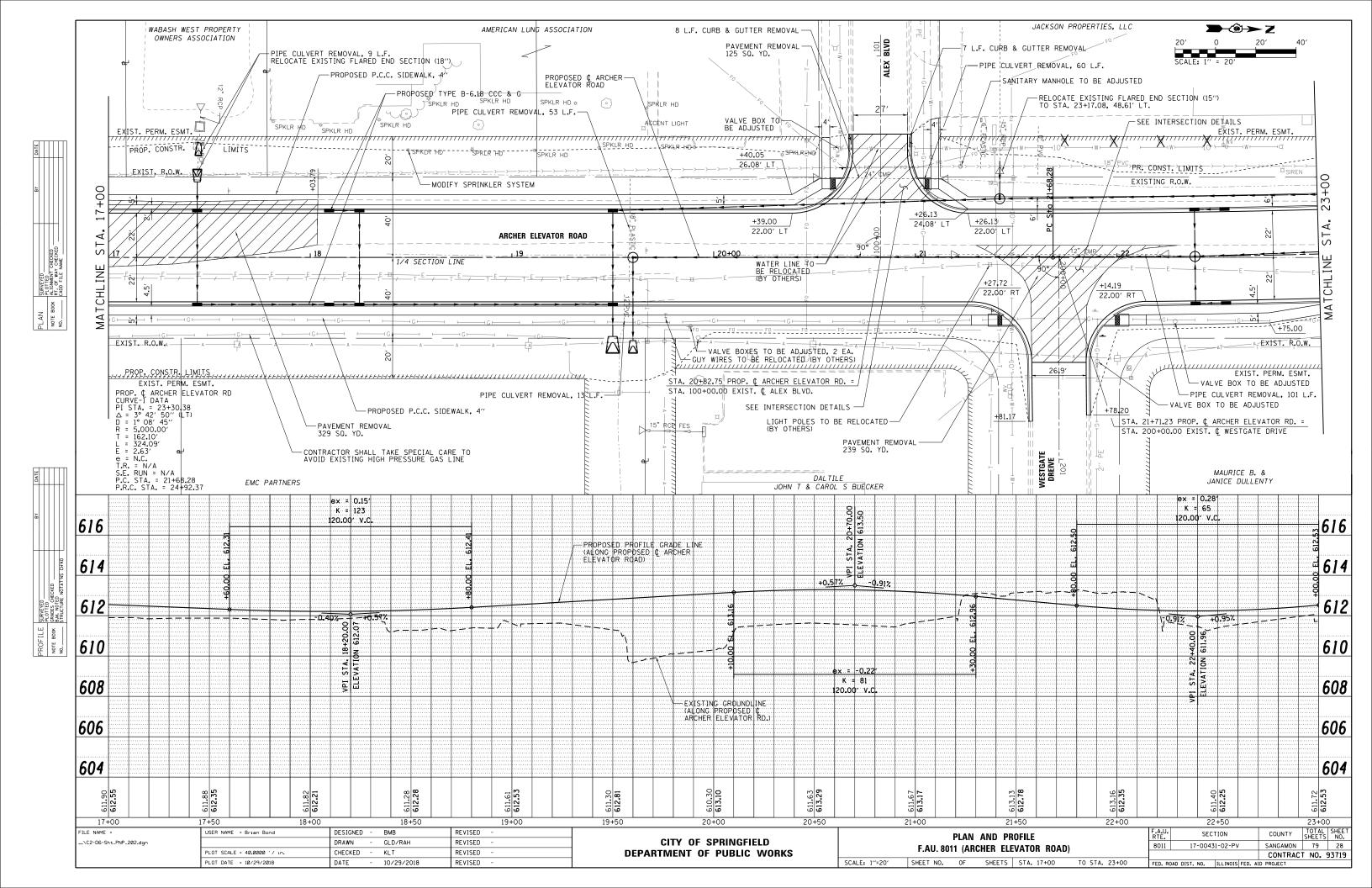
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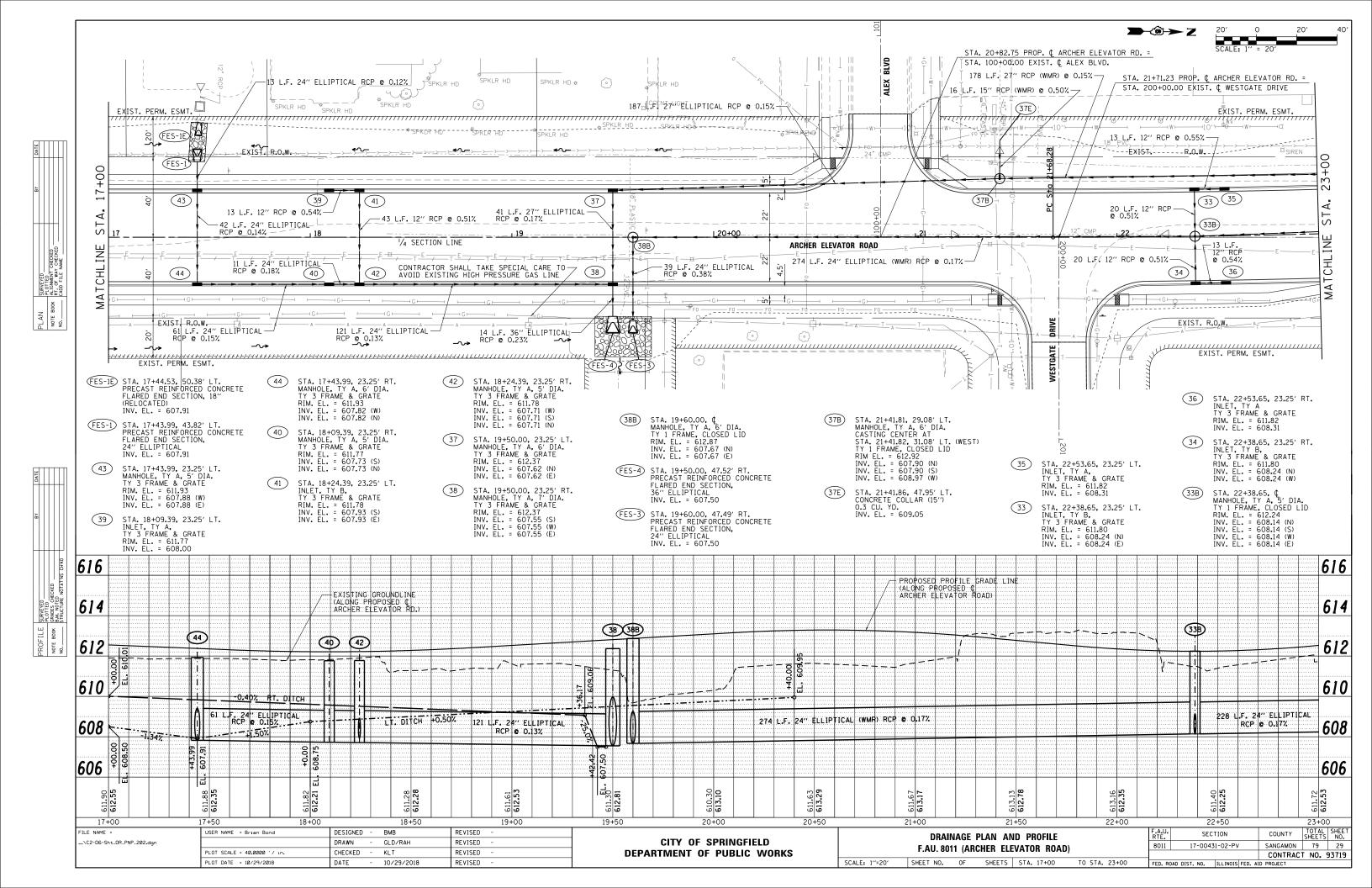
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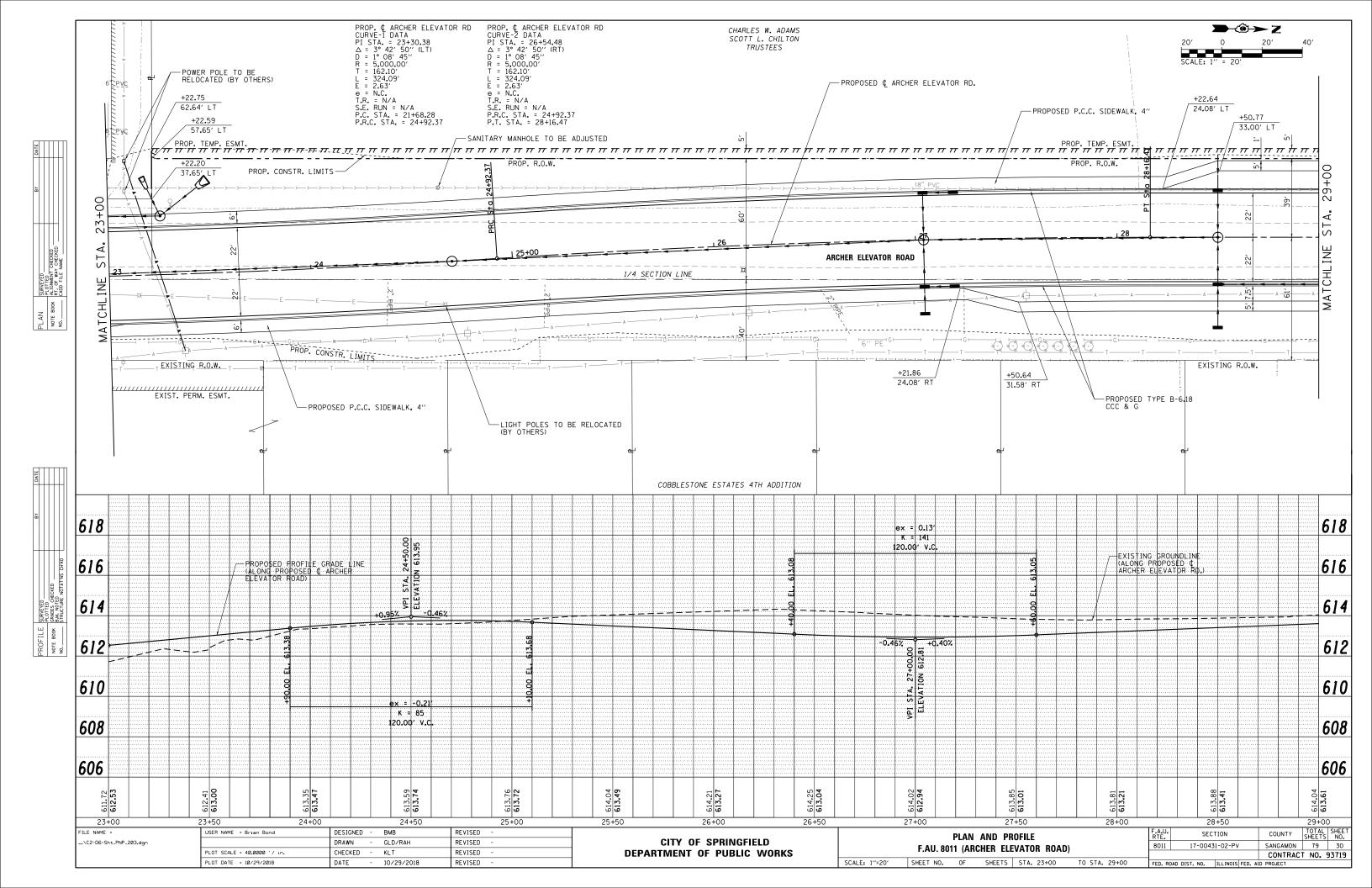
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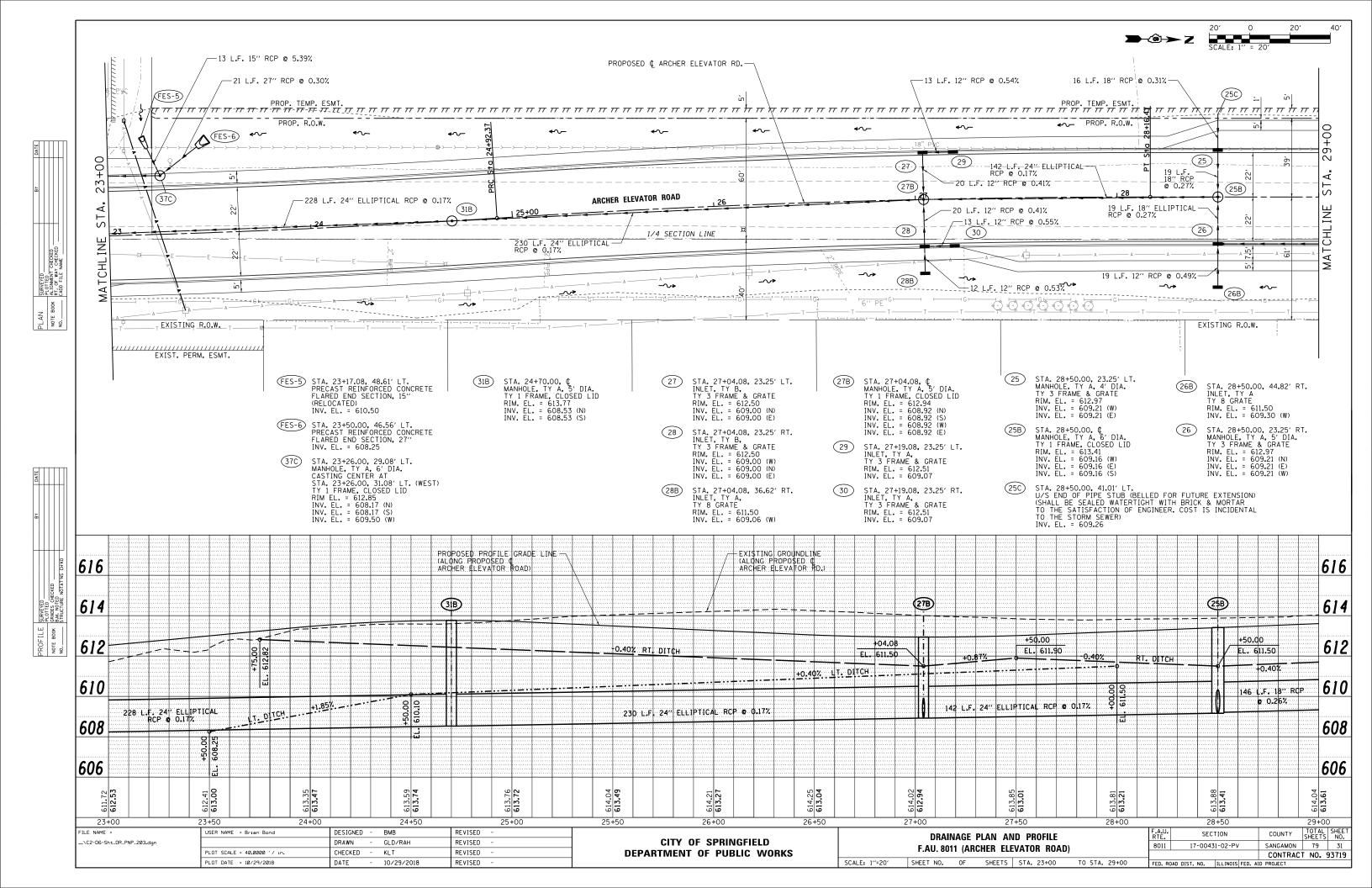


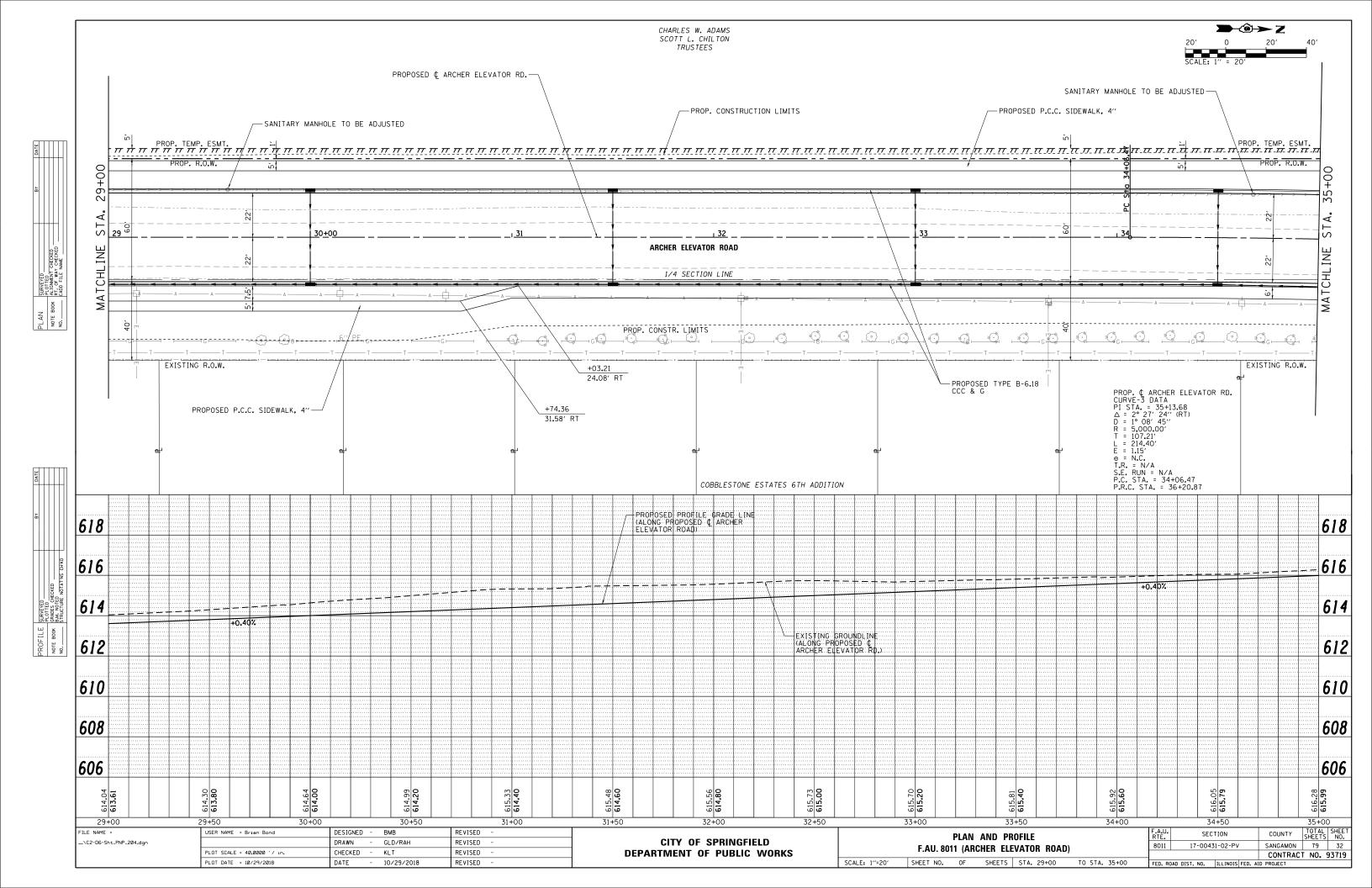


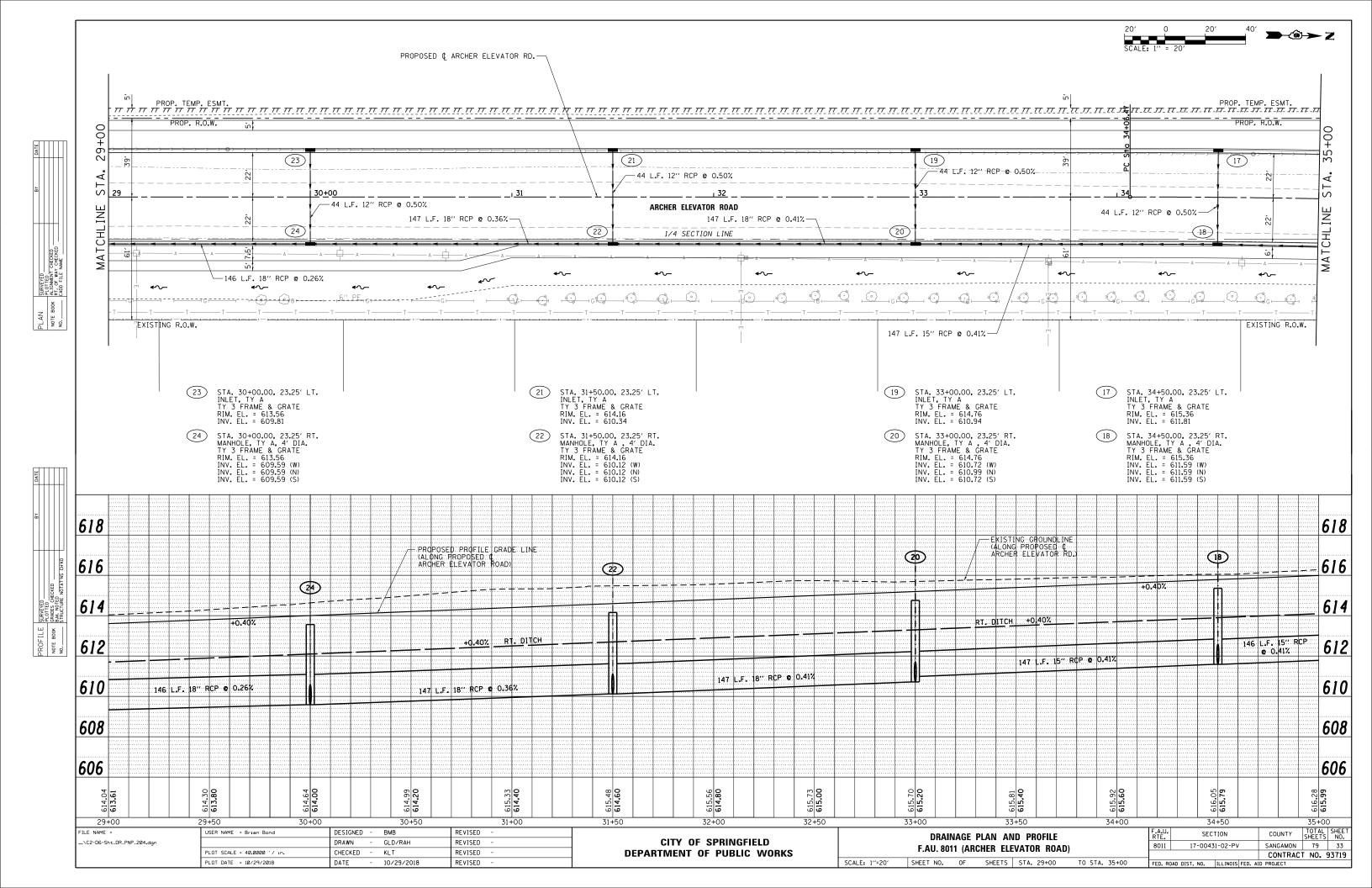


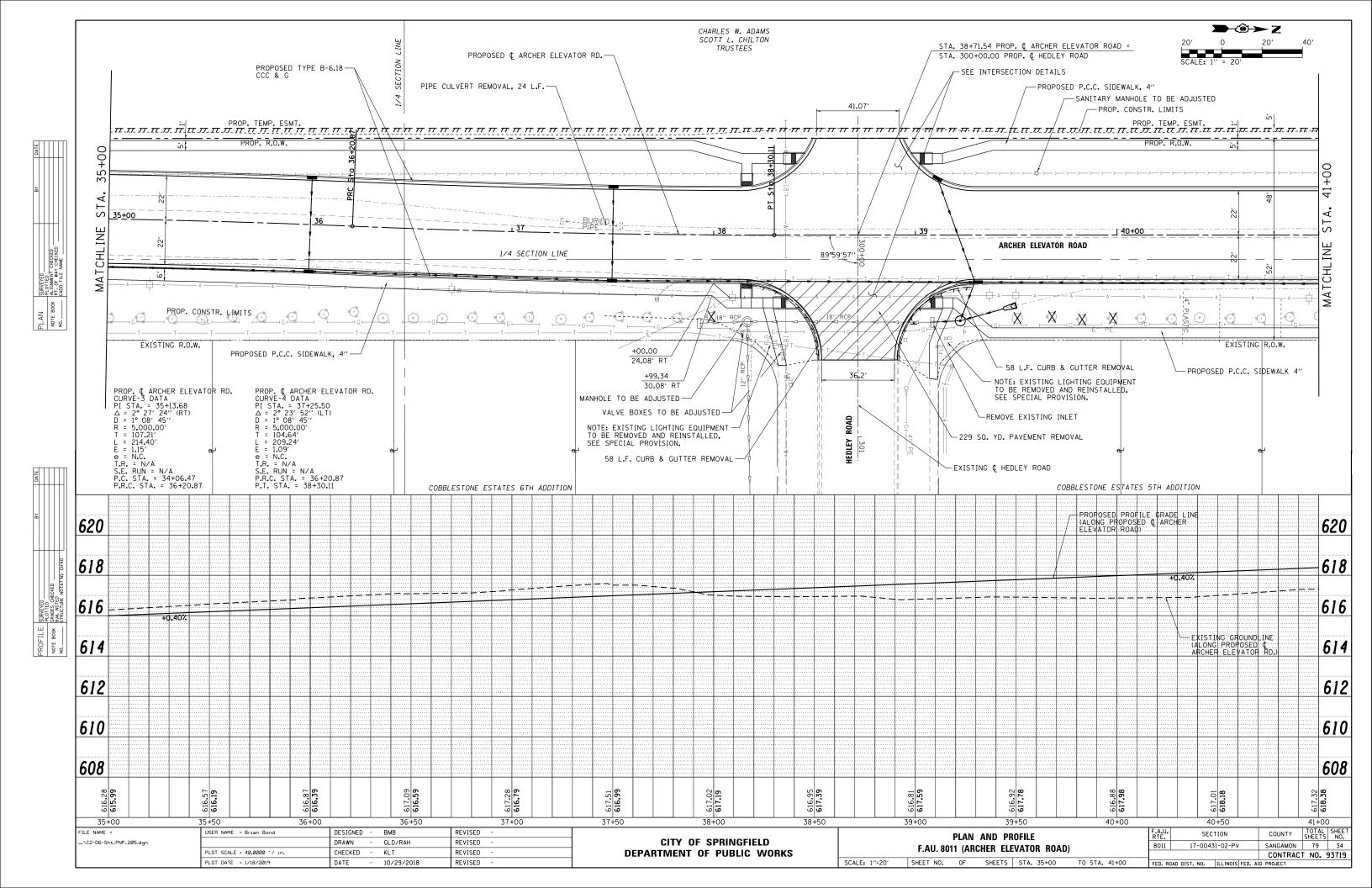


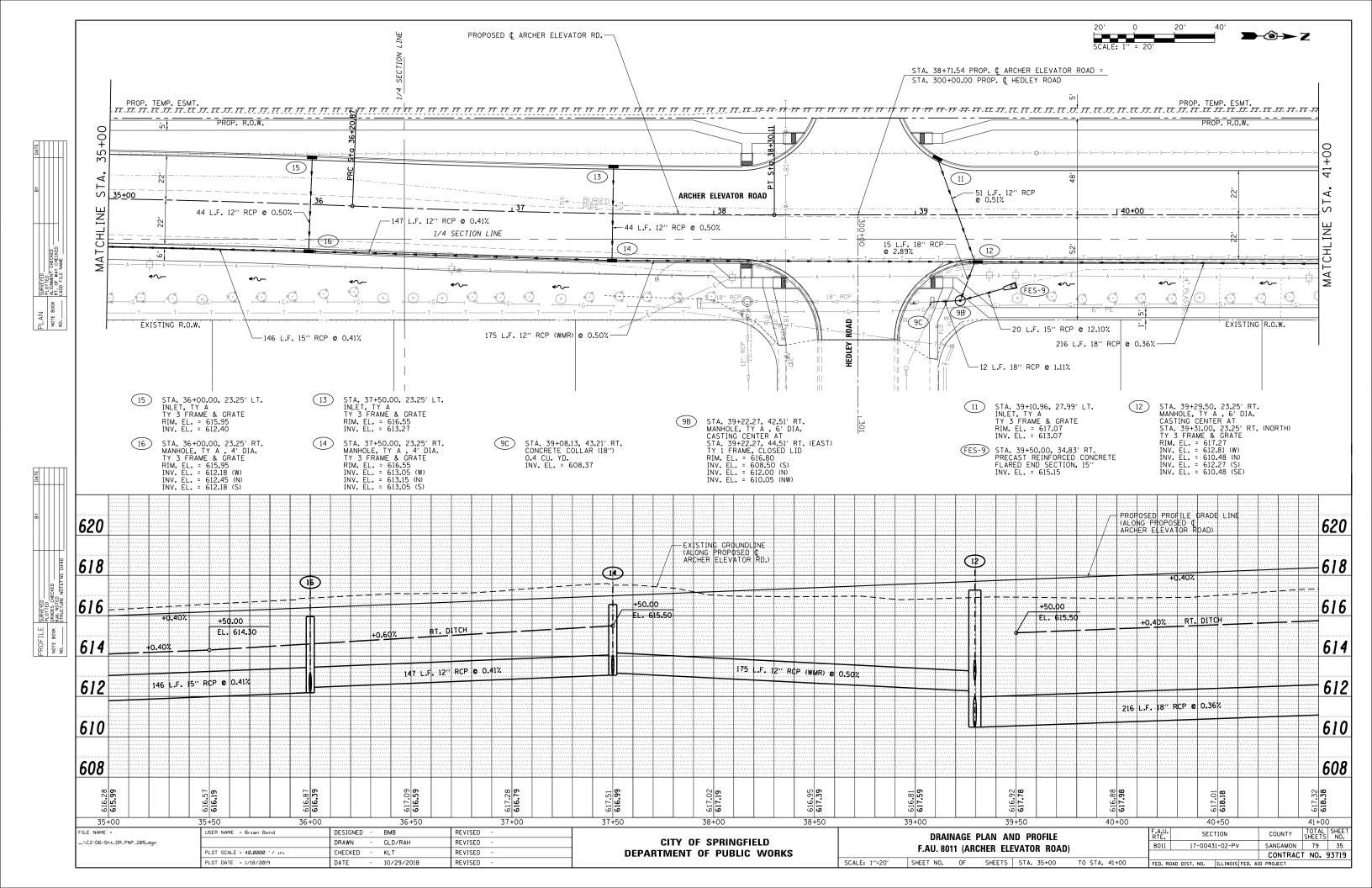


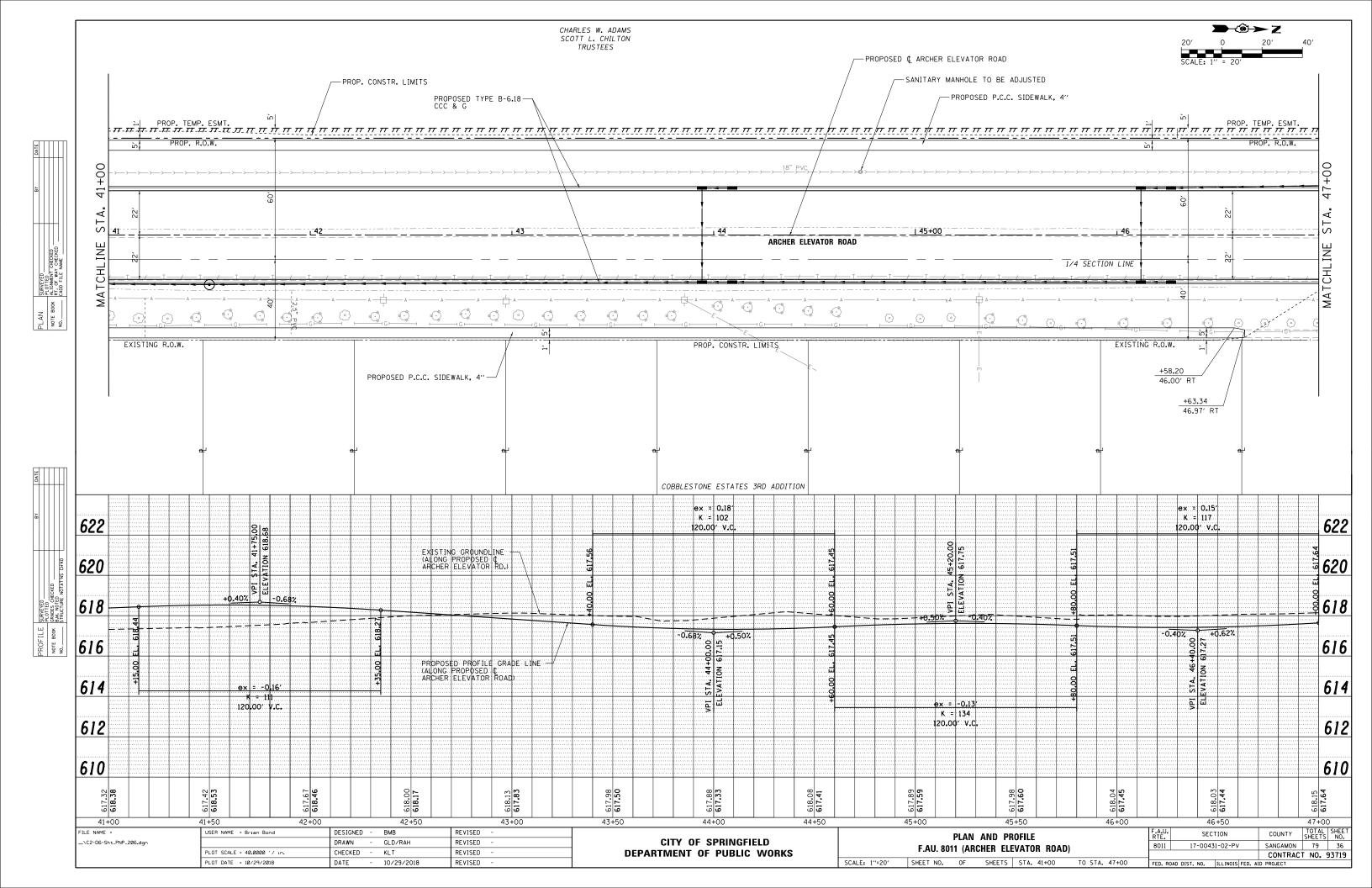


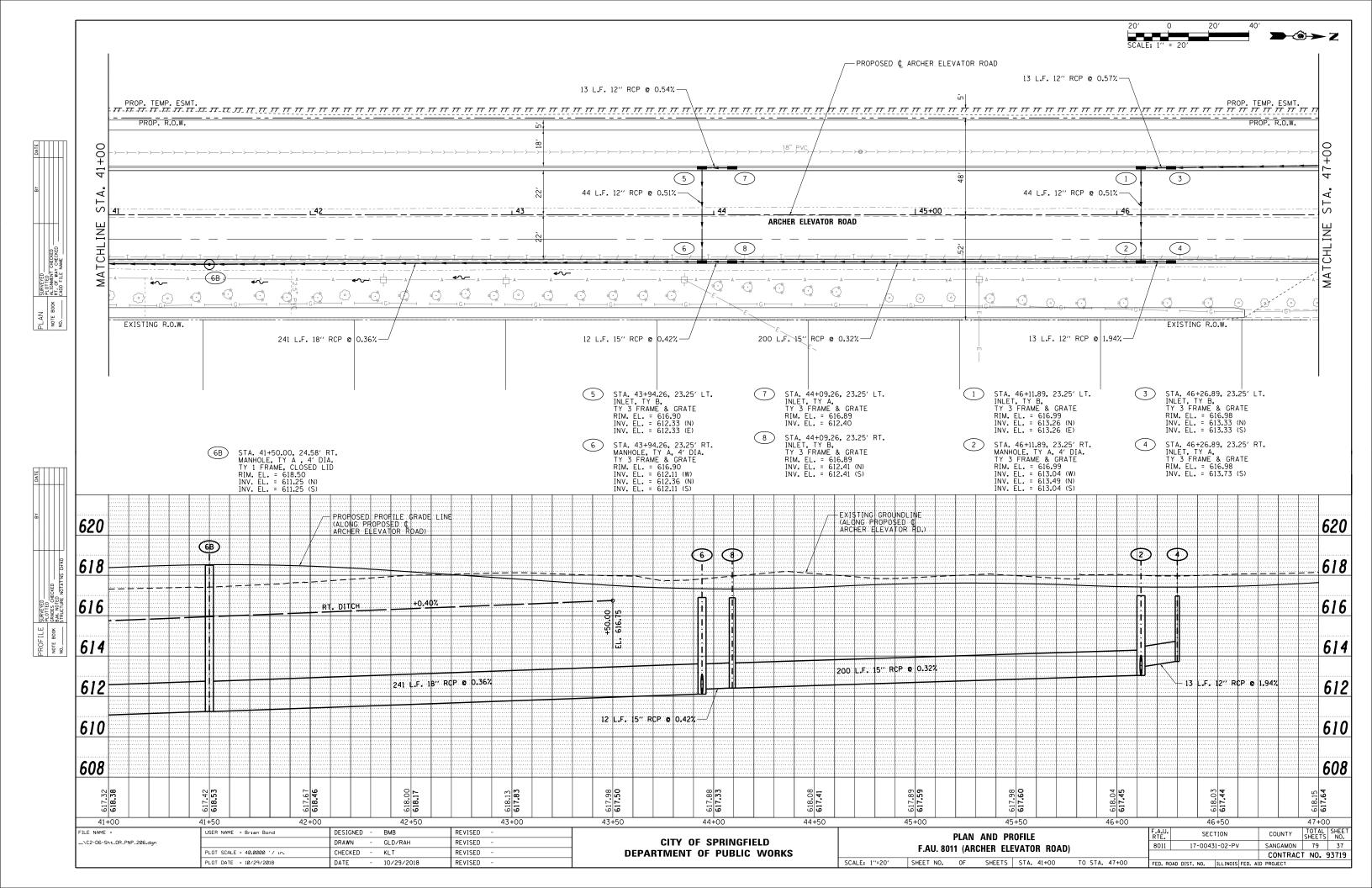


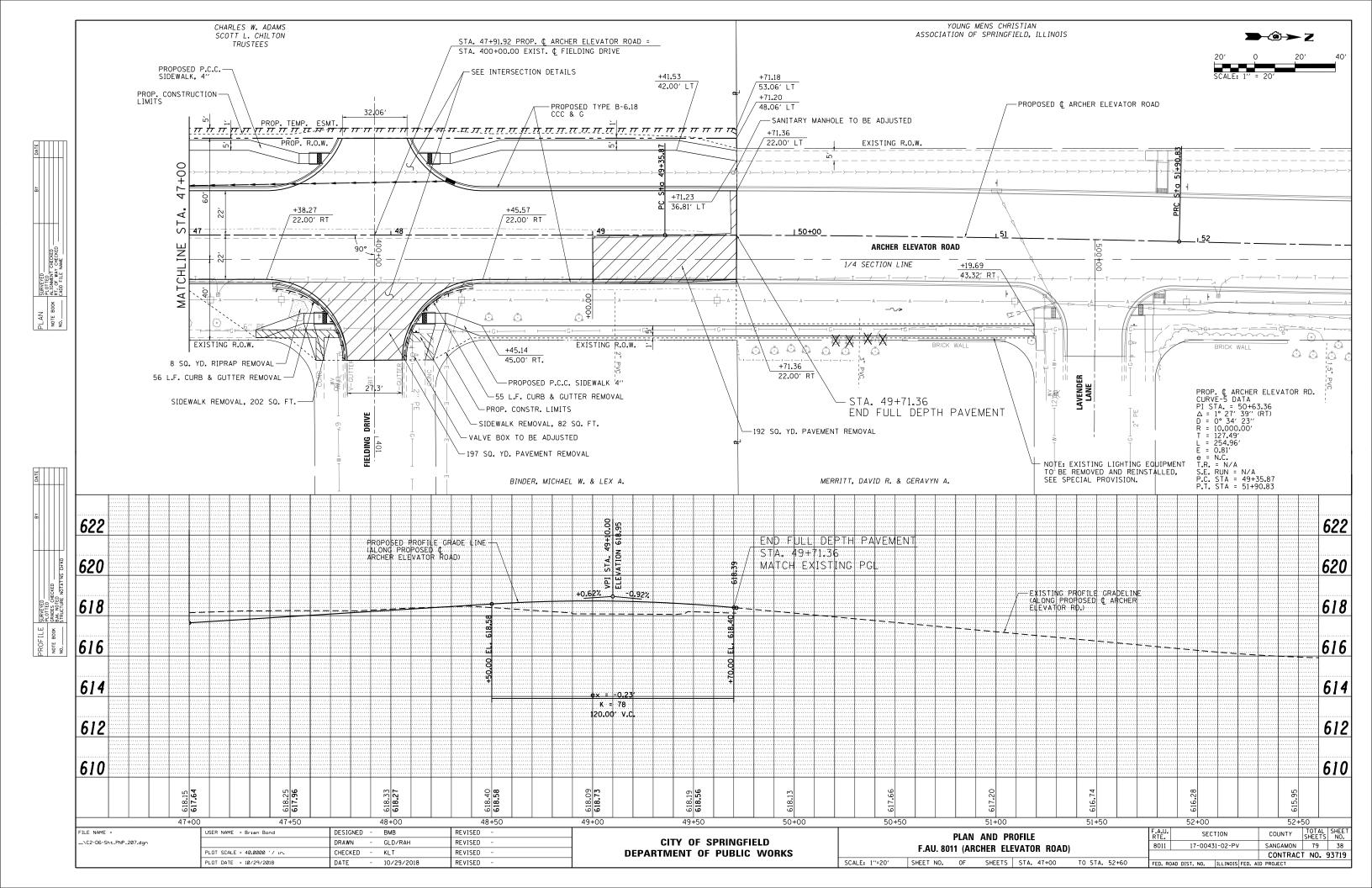


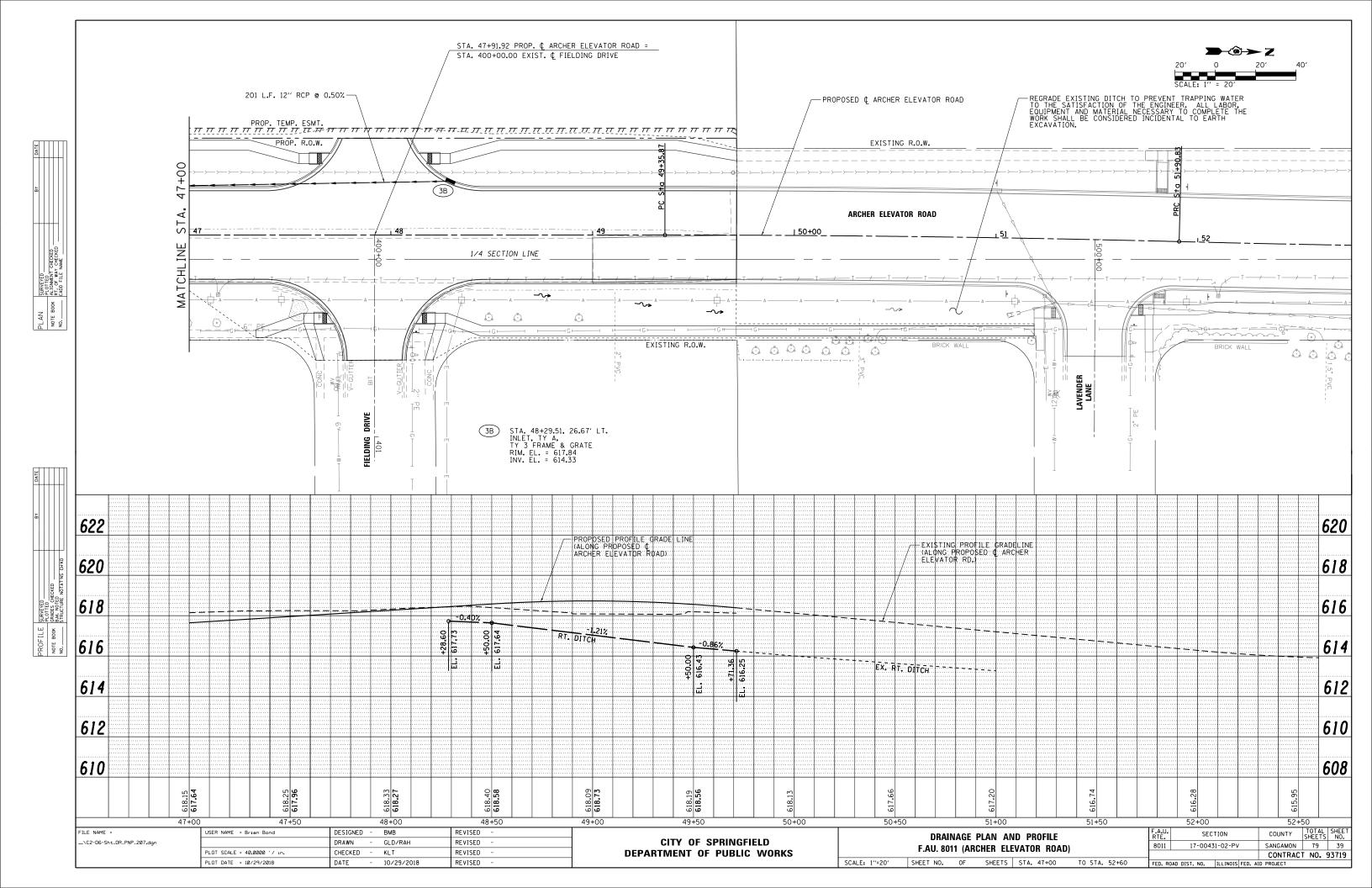


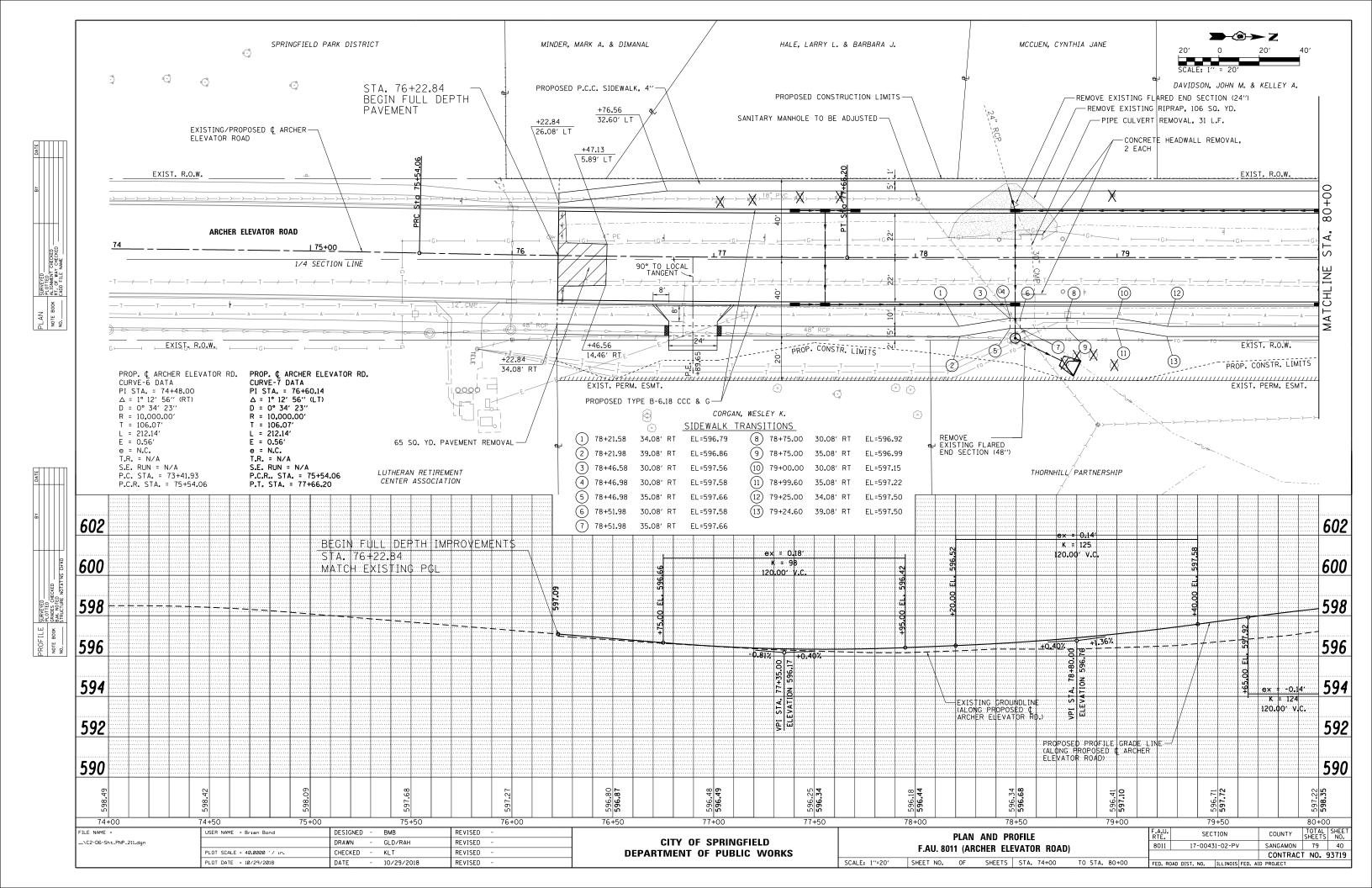


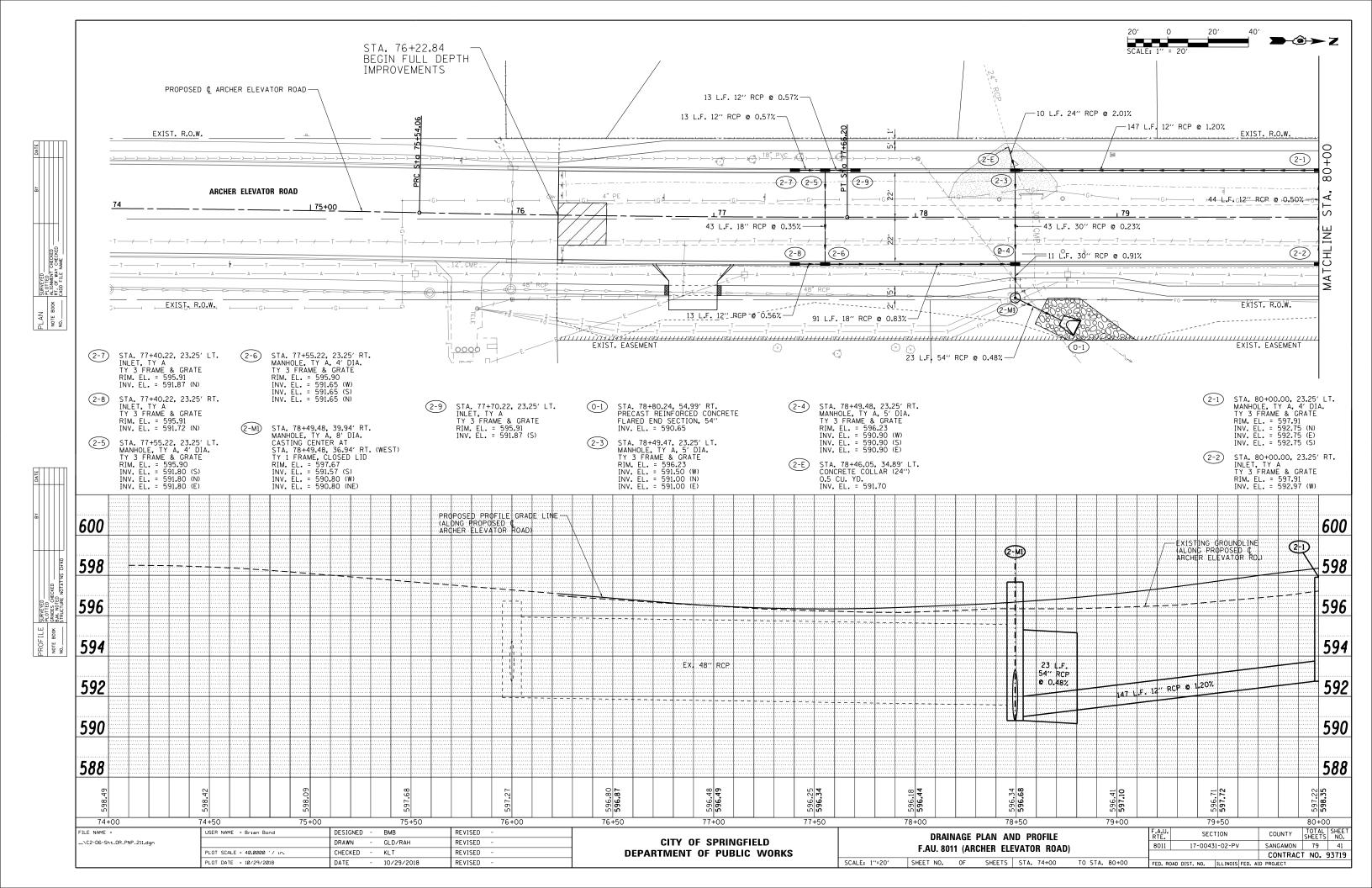


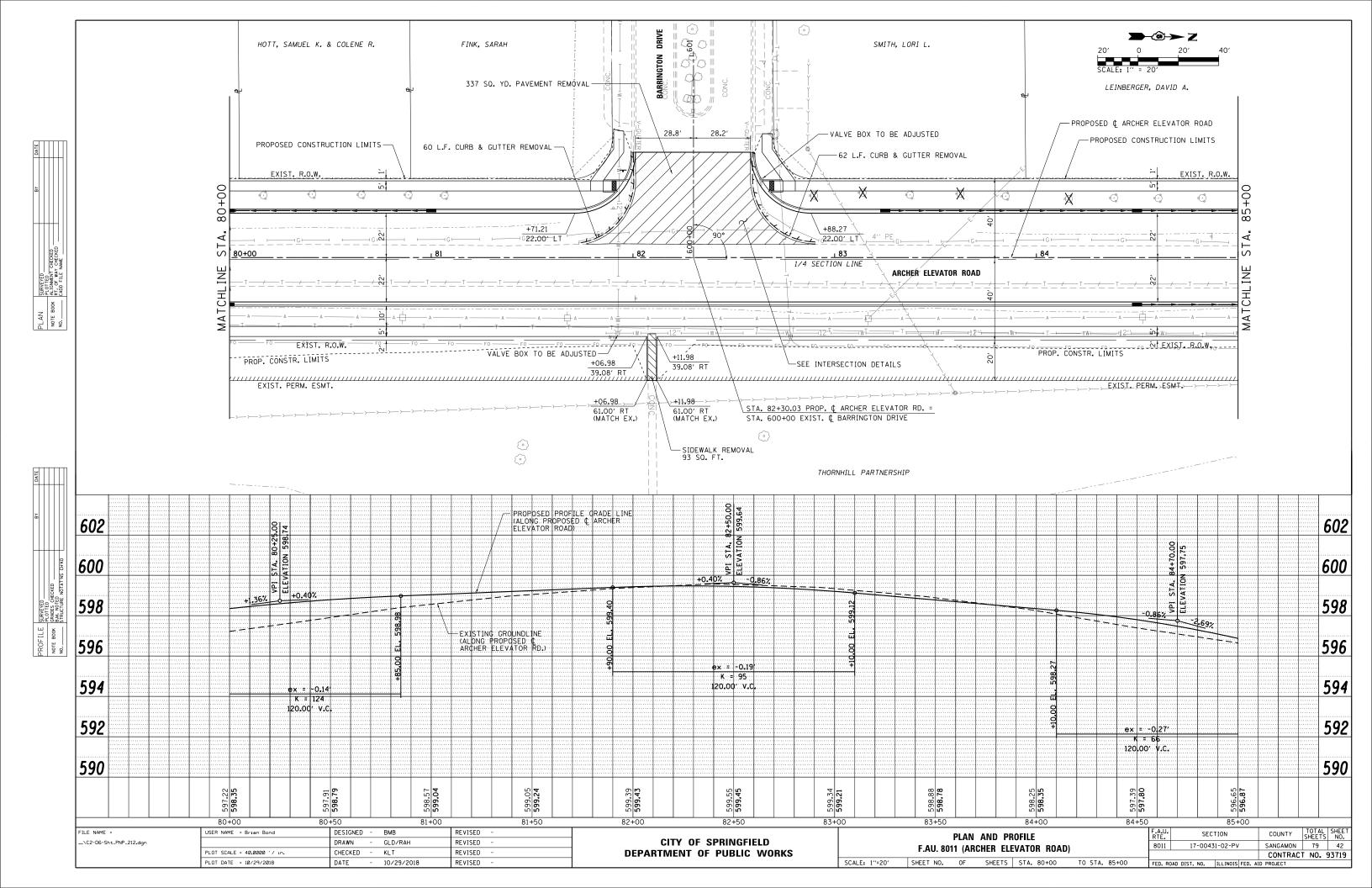


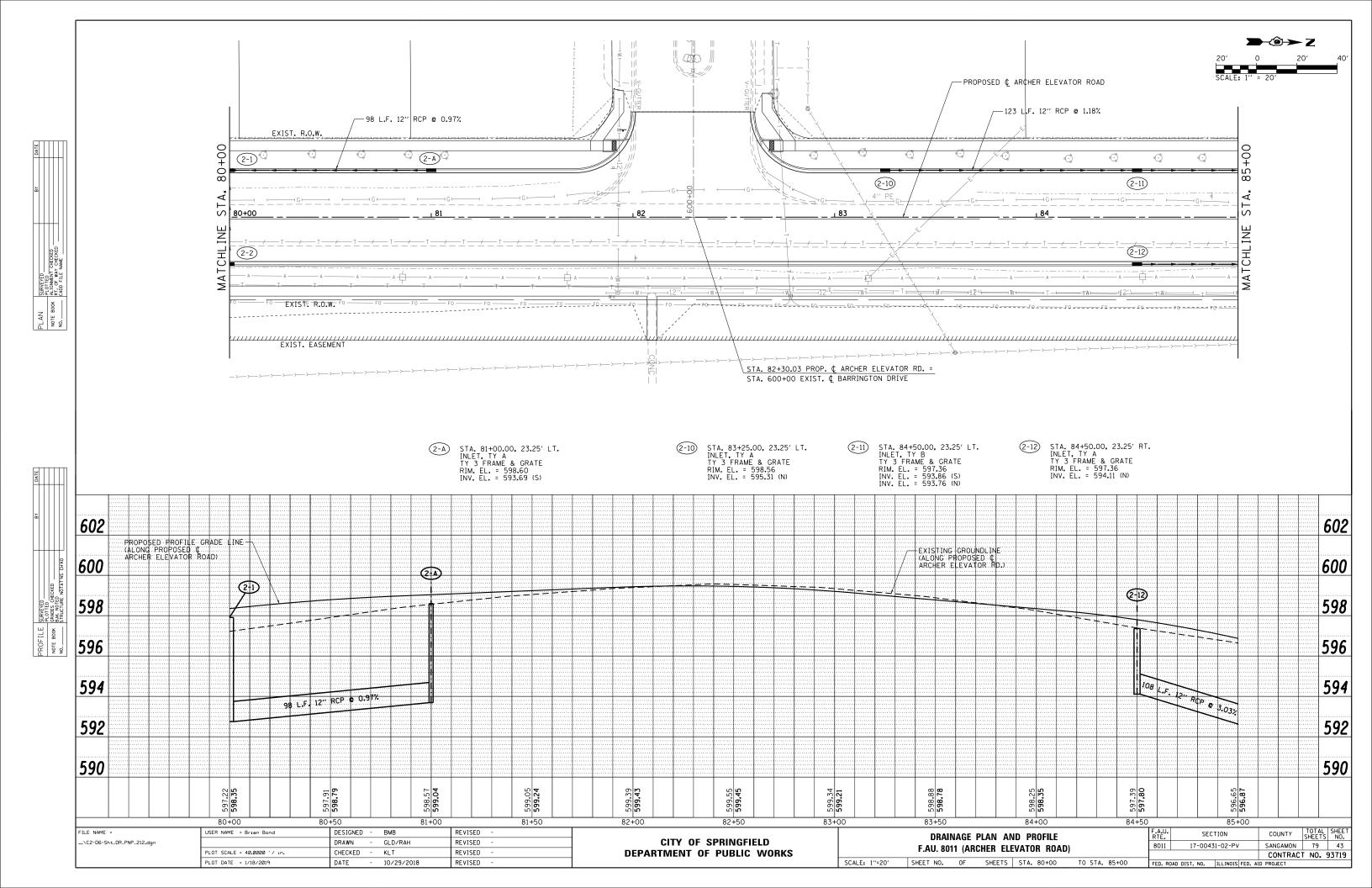


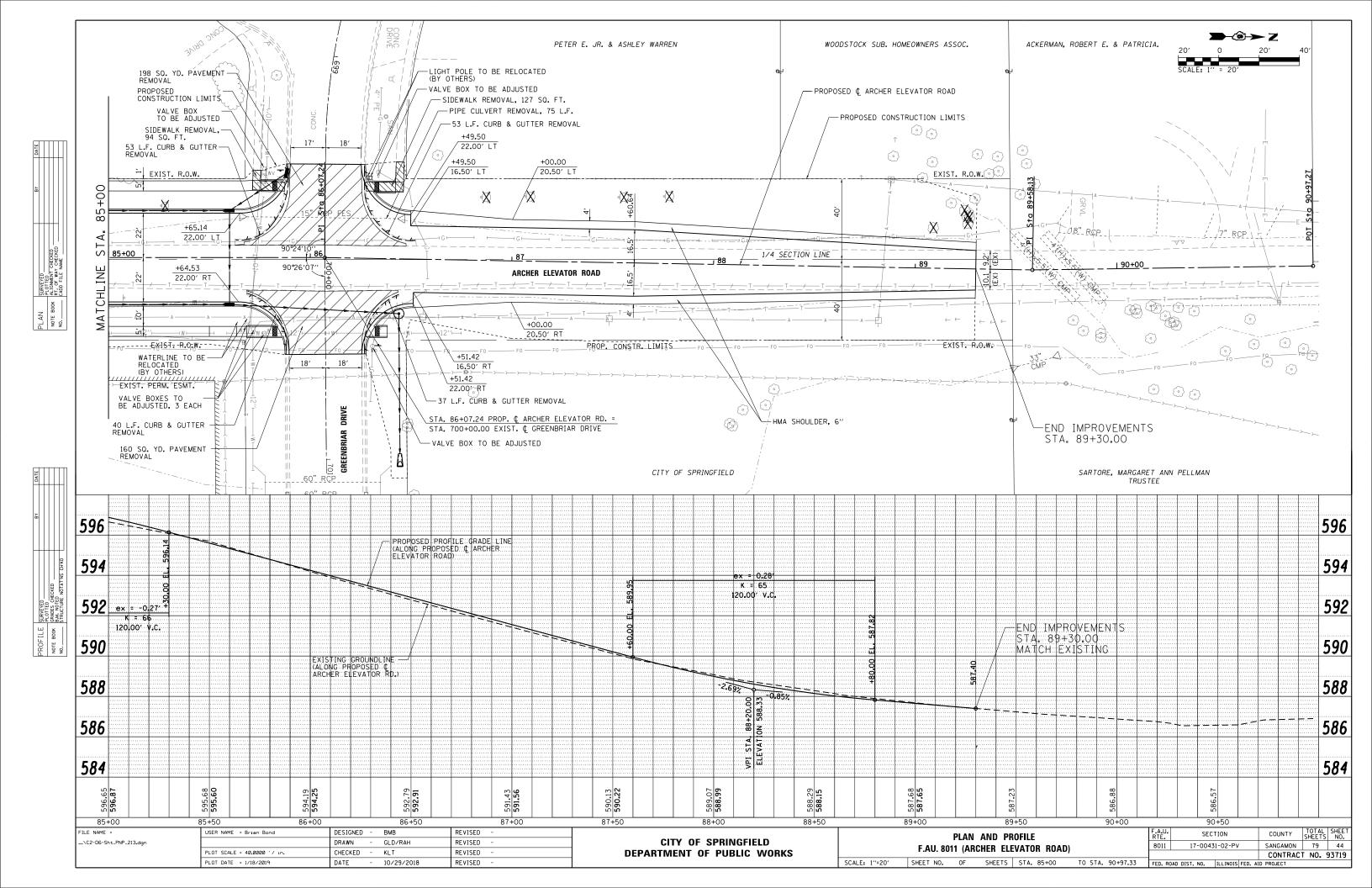


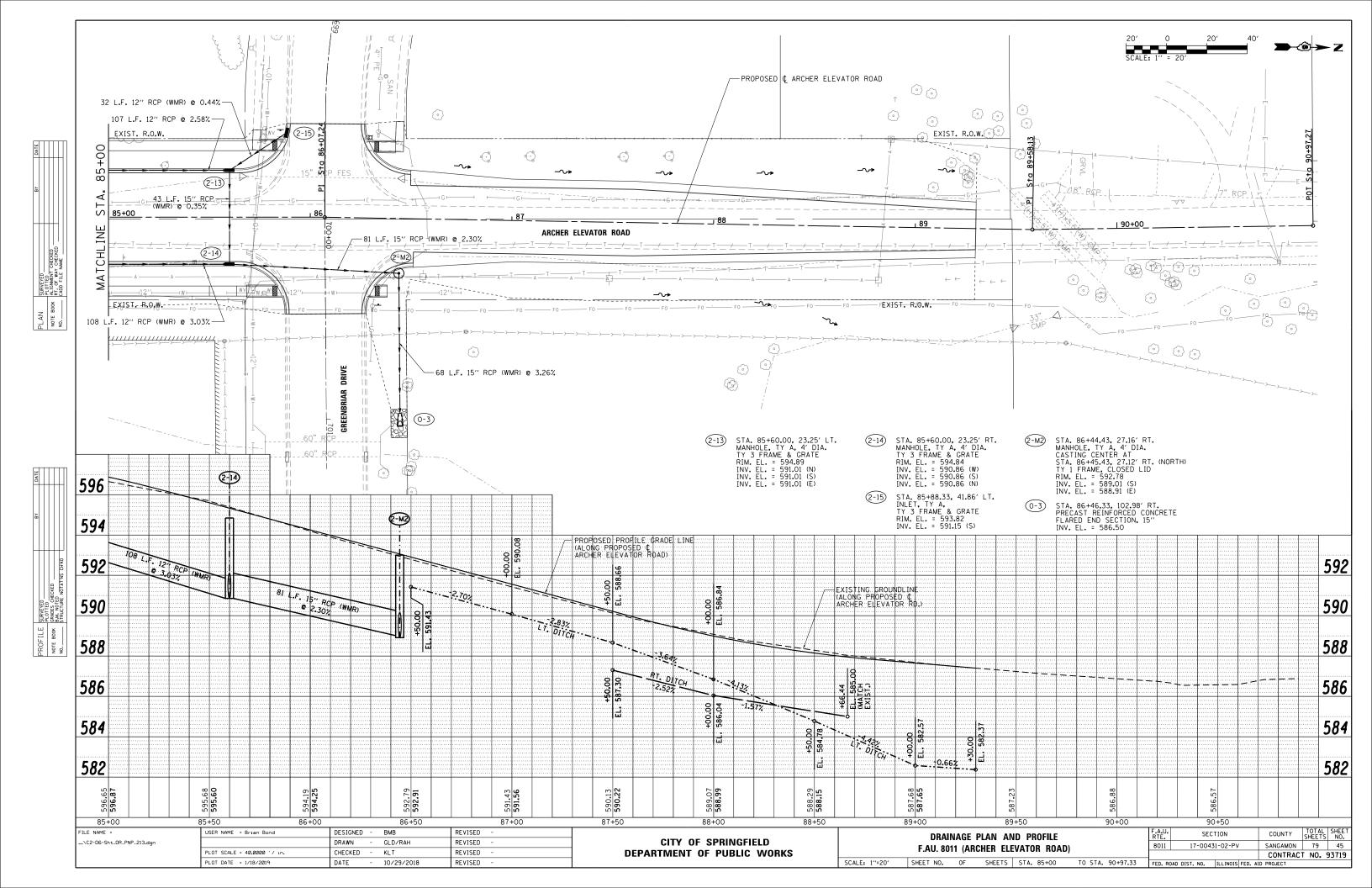


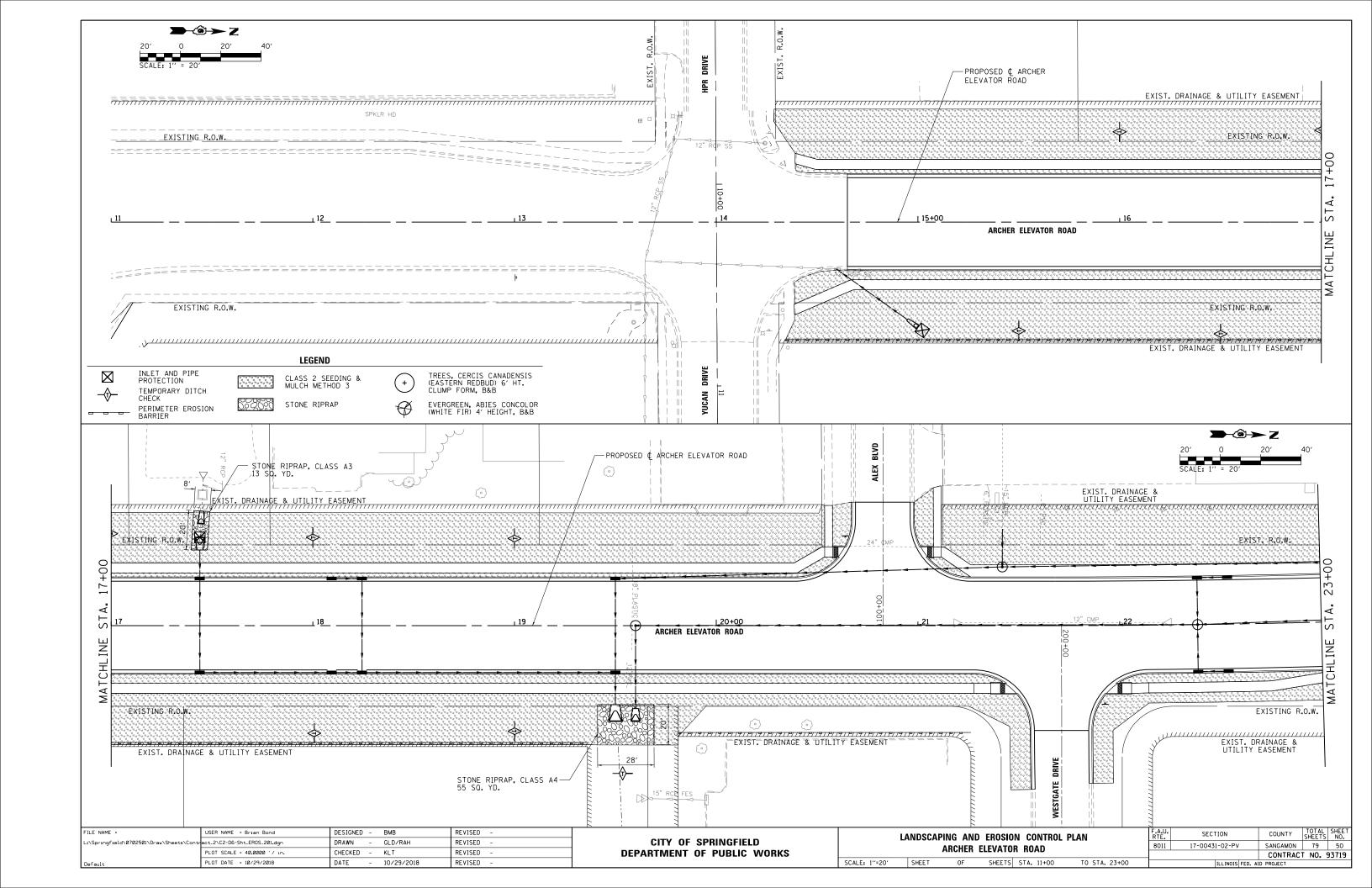


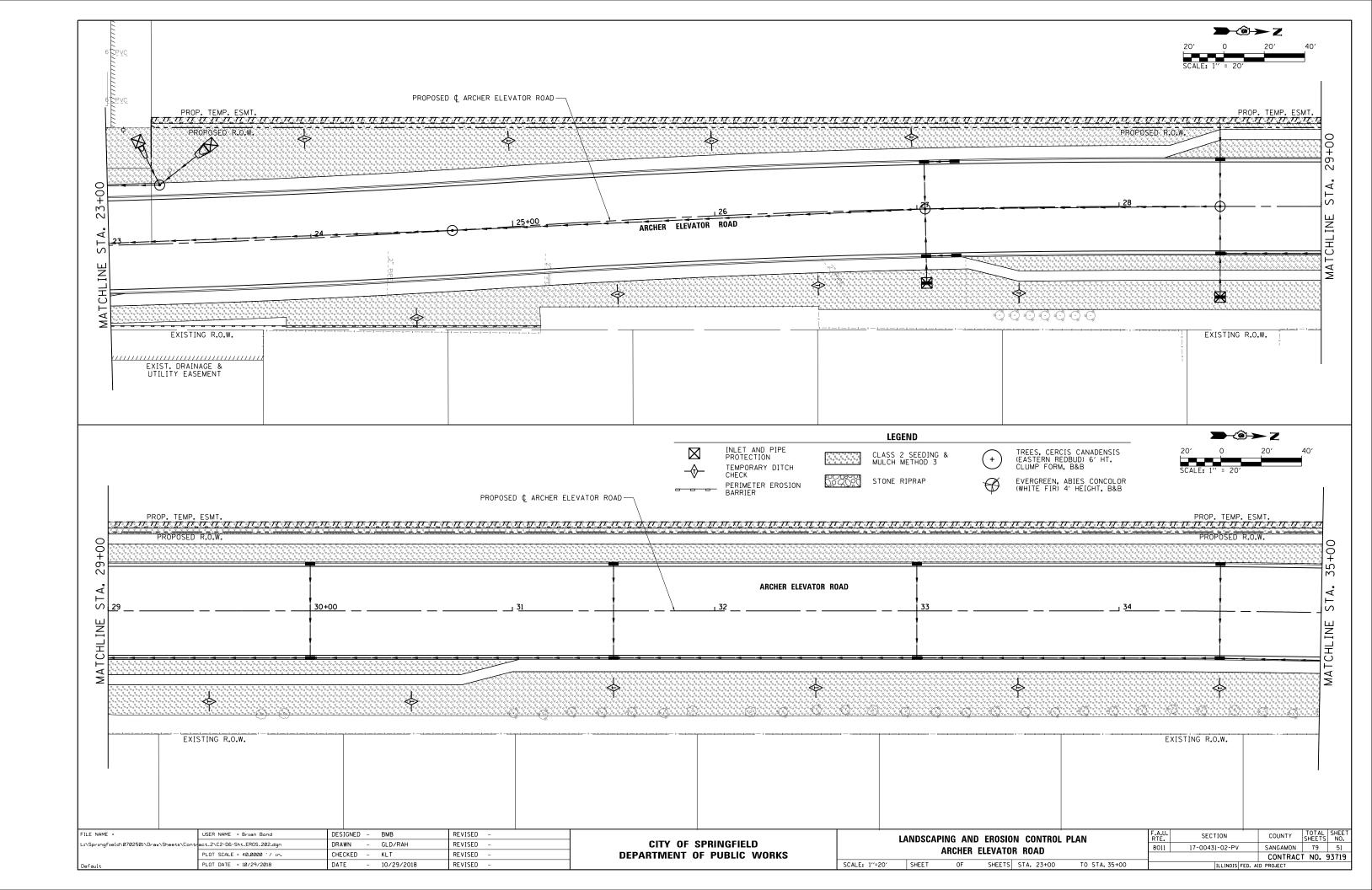


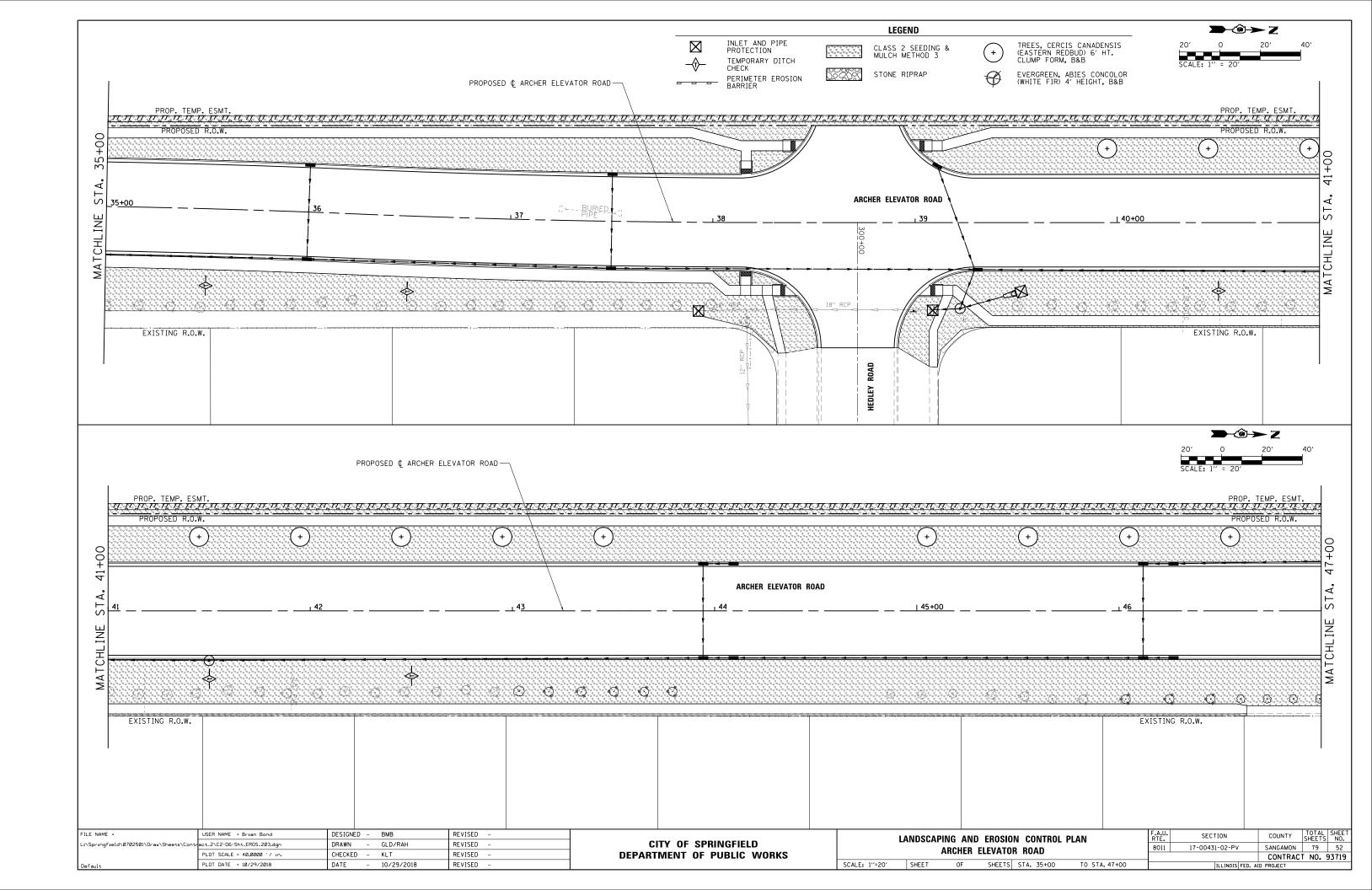


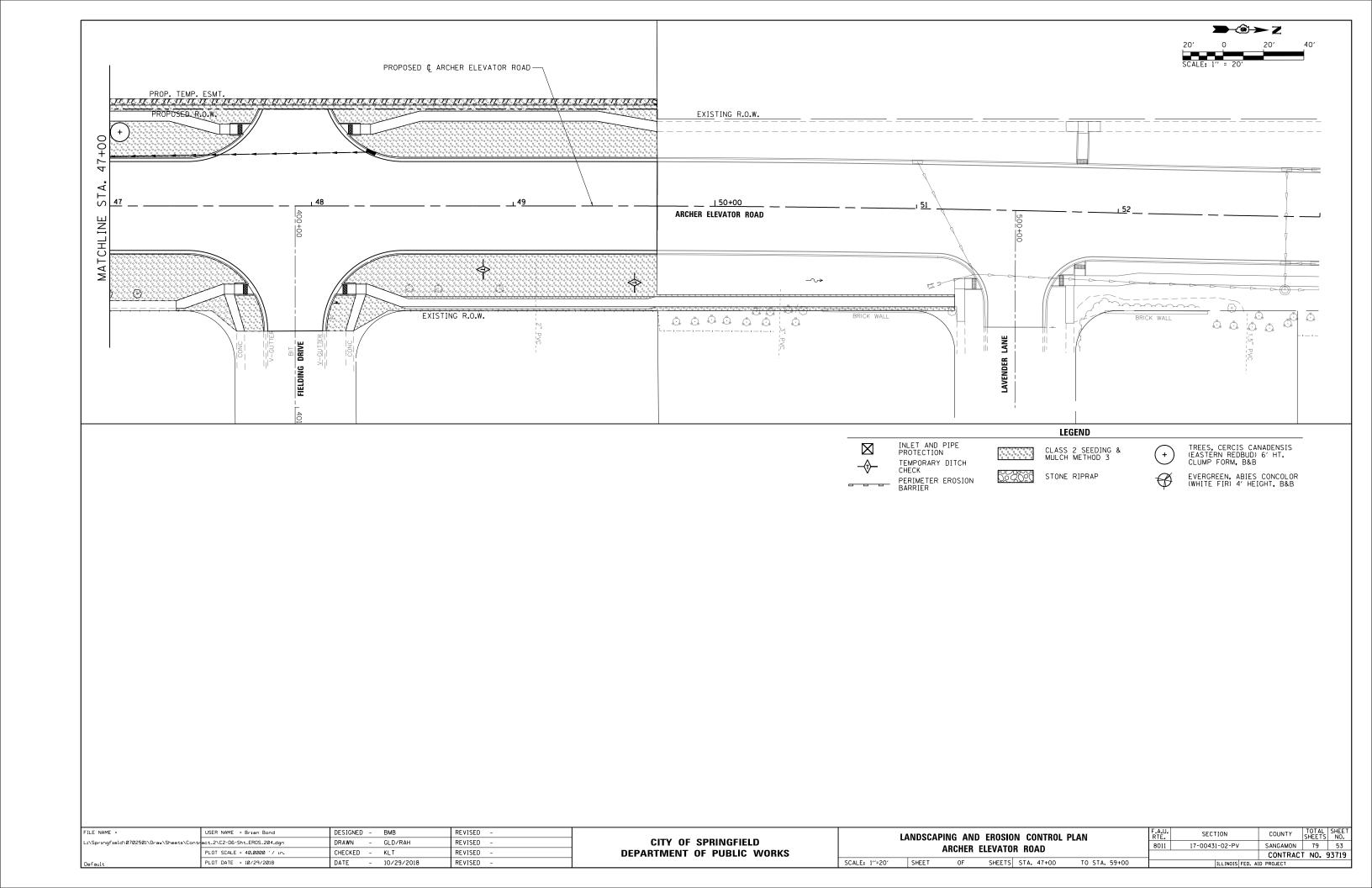


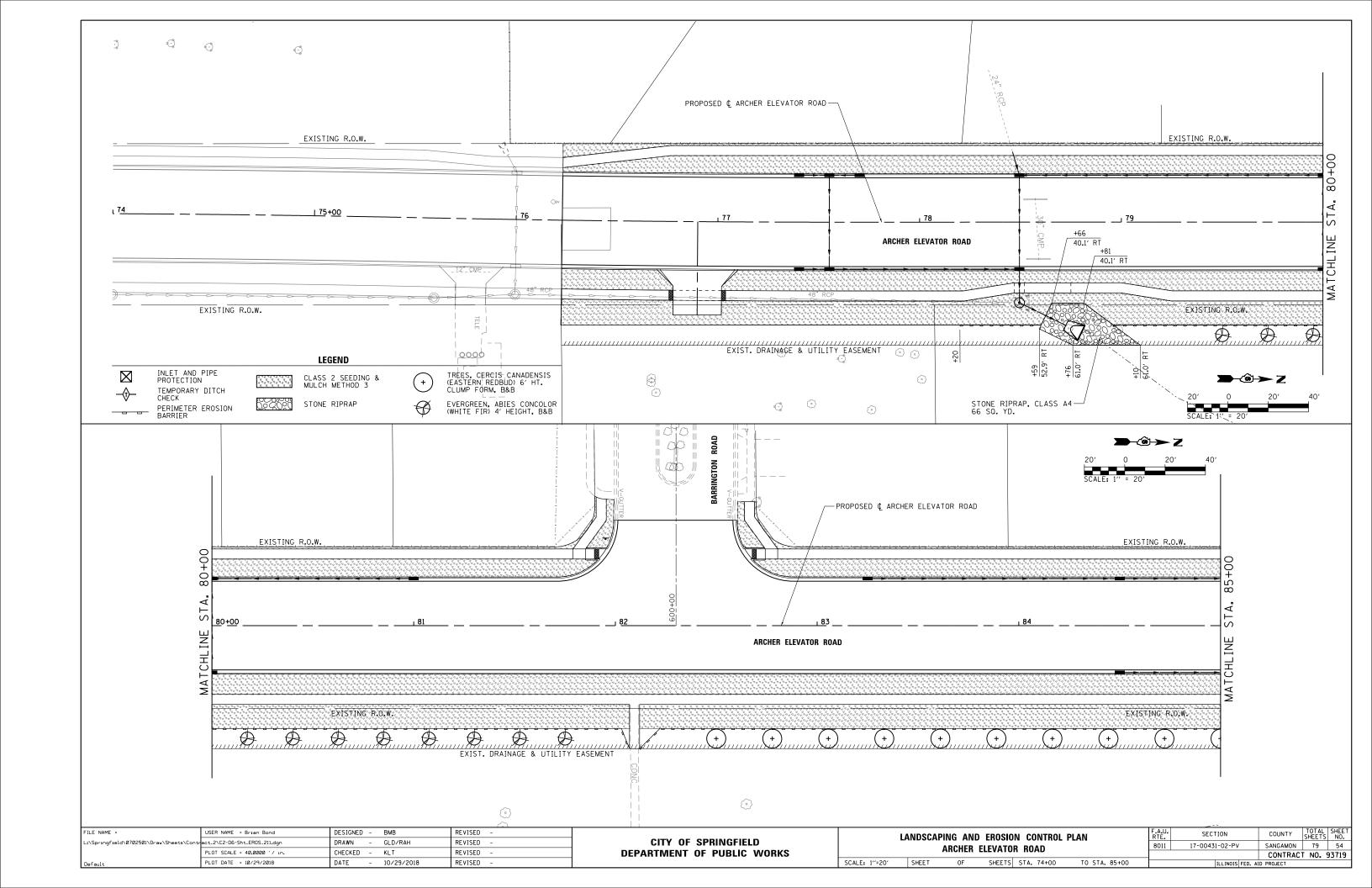


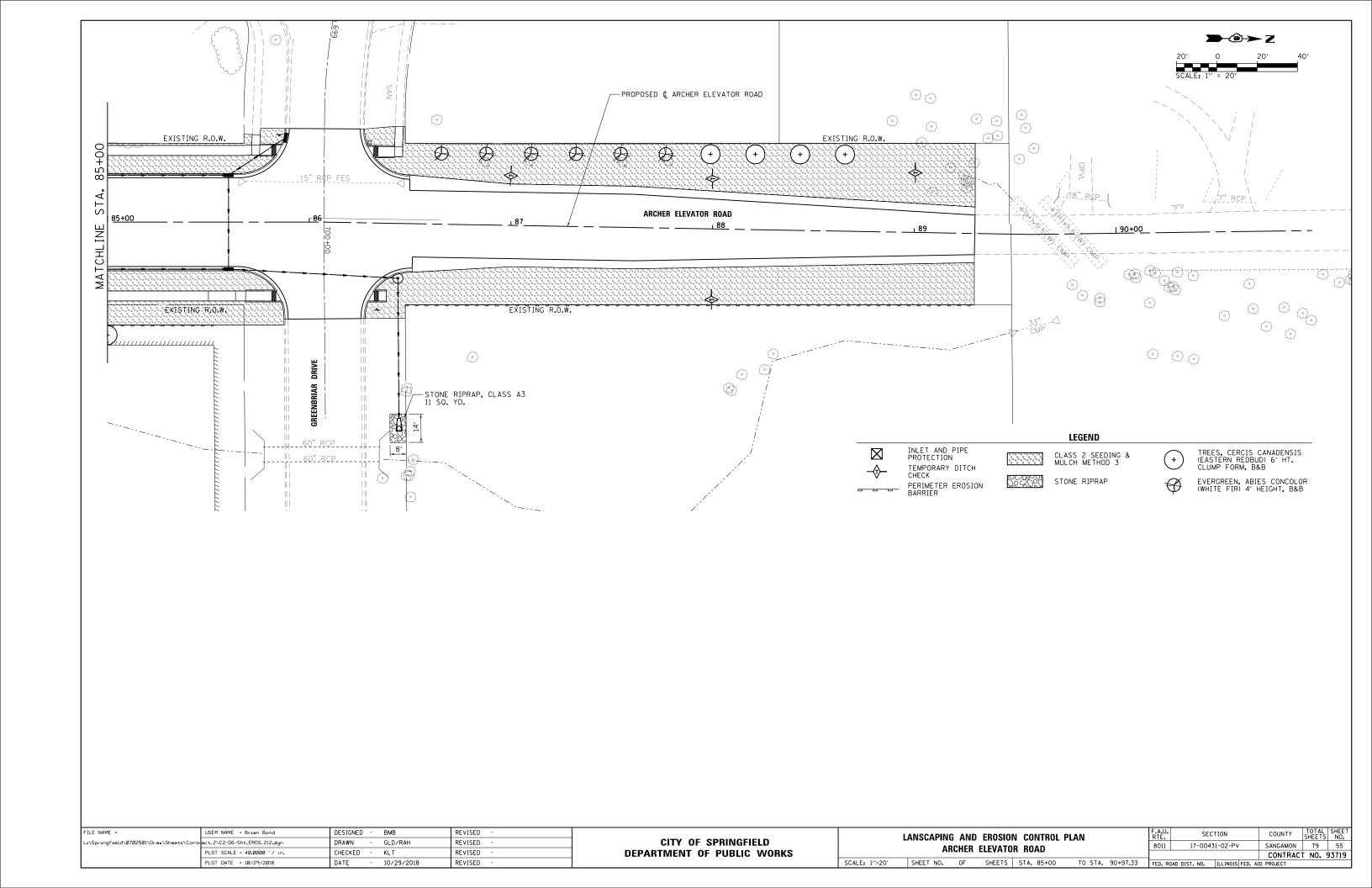












# CP for Franklin's Ground Squirrel Archer Elevator Rd – Wabash Ave to Greenbriar Dr.

ATTACHMENT C: DATA



Sequence #: 14072-Update

Archer Elevator Road Resource in Vicinity of Project Polygon

\*T&E

\*Ducks Unlimited Wetlands

INAI & NP w/in 1 mile

\*none found

No Resource Found

\*INAI

\*Nature Preserve

\*INHS Wetland

\*National Wetlands Inventory

\*Roadside Prairie Inventory

County: SANGAMON

Section(PLSS): 3 16N6W35

Area: -0.0696 sq. miles = -44.5435 acres

Report created by Vincent Hamer

Threatened & Endangered Species (T&E)

Nature Preserve (NP)

Illinois Natural Areas Inventory (INAI)

Wetlands **INHS** Wetland

Roadside Prairie Inventory



Include as additional documentation with permit applications (USACE).



#### **Alexandra Zelles**

From: Ting, Tih-Fen <TTing1@uis.edu>
Sent: Friday, February 8, 2019 2:48 PM

To: Alexandra Zelles

**Cc:** Kristin Timmons; Heather Lacey; Ting, Tih-Fen

**Subject:** RE: Archer Elevator Road Widening (Sect. 17-00431-02-PV) - ITA for Franklin's Ground Squirrel

Hello Alex,

According to our radio-tracking of juvenile Franklin's ground squirrels, they used the agricultural field located west of Archer Elevator, south of Iles, and east of Lenhart frequently for dispersal or movement (IDNR has those location data). Sounds to me it's the same agricultural field for which some land acquisition will be required for your project based on your email. The said agricultural field has been used heavily by the Franklin's ground squirrel because it is adjacent to the Sangamon Valley Trail where a colony of Franklin's ground squirrels reside. Our monitoring of the colony shows that its abundance has gone down by 30 between 2015 and 2018. That's a very large number for a rare and isolated species.

In addition, Archer Elevator, Iles, and Lenhart have posed movement barriers for some of the Franklin's ground squirrels as we have come across their carcasses as road-kills over the years. Even though those are two-lane roads (and frankly the road conditions aren't that great), a significant number of drivers do drive fast and well above the local speed limit in that area. As such, I wonder what your widening of Archer Elevator might mean for the speed and driving behavior of the drivers, and consequently the well-being of Franklin's ground squirrels in the area. Assuming everything else is equal, widening the road itself means that Franklin's ground squirrels would have a wider area/barrier to cross, which then could increase their exposure to potential traffic hazards. If the widen road also leads to the increase of driving speed (even done unconsciously and presumably due to the ease of driving on the newly surfaced/constructed road), then the risk of dying from crossing the road could further heighten for the Franklin's ground squirrel. Therefore, I wonder if you have any plan in the project that will discourage speeding and provide a safe way (e.g., small wildlife underpass) for Franklin's crossing.

These are my immediate thoughts about your project. I hope they are helpful. Let me know if you have any questions. Thank you.

Tih-Fen

From: Alexandra Zelles [mailto:azelles@cmtengr.com]

Sent: Thursday, February 07, 2019 3:26 PM

To: Ting, Tih-Fen <TTing1@uis.edu>

Cc: Kristin Timmons <a href="mailto:ktimmons@cmtengr.com">ktimmons@cmtengr.com</a>; Heather Lacey <a href="mailto:hlacey@cmtengr.com">hlacey@cmtengr.com</a>;

Subject: Archer Elevator Road Widening (Sect. 17-00431-02-PV) - ITA for Franklin's Ground Squirrel

Hello Dr. Ting,

My name is Alex Zelles; I am an environmental scientist with CMT. We are the consultant design team for the City of Springfield's planned widening of Archer Elevator Road between Wabash Avenue and Greenbriar Drive. I have attached a USGS map and aerial map for reference.

We are completing the ITA and Conservation Plan for the Franklin's Ground Squirrel, which was identified as present within the project area. According to the city, IDNR has stated that the project can proceed with the ITA and no survey will be required. IDNR has also directed us to contact you regarding the conservation plan as you have the most recent location data on the FGS. I see from previous plans that you have assisted with surveys of FGS presence on other projects in the area as well.

The proposed project involves the widening and reconstruction of Archer Elevator Road in Springfield, Sangamon County, Illinois from HPR Road/Yucan Drive to Lavender Lane and from approximately 600 feet south of Barrington Drive to approximately 300 feet north of Greenbriar Drive. The project will widen the existing two-lane rural roadway to a three-lane urban arterial roadway with center left-turn lane and dedicated bike lanes on both the northbound and southbound lanes, curb and gutter, storm sewer, and sidewalk on both the east and west sides of Archer Elevator Road. The project is primarily located within existing roadway right-of-way but will require land acquisition from an adjacent agricultural field.

It would be great to get your initial thoughts on this project and its impact to the FGS. Please let me know if there is anything else you need. Feel free to reply to this email or call me at the numbers listed below.

Thanks, and I look forward to hearing from you.

**ALEXANDRA ZELLES** | Environmental Scientist



Crawford, Murphy & Tilly | Engineers & Consultants

550 North Commons Drive, Suite 116 | Aurora, IL 60504 w 630.556.1135 | m 630.632.5859 | f 614.854.0569 | <u>azelles@cmtengr.com</u>



# CP for Franklin's Ground Squirrel Archer Elevator Rd – Wabash Ave to Greenbriar Dr.

ATTACHMENT D: PHOTOS





Intersection of Archer Elevator Road and HPR/Yucan Drive, looking south towards Wabash Avenue.



Archer Elevator Road, looking north towards Westgate Dr.



Archer Elevator road south of Hedley Road, looking north.



Existing culvert crossing Archer Elevator Road south of Greenbriar, looking west.



Archer Elevator Road at Barrington Road, looking north.



South of Greenbriar Drive and Archer Elevator Road intersection, looking south.

# CP for Franklin's Ground Squirrel Archer Elevator Rd – Wabash Ave to Greenbriar Dr.

ATTACHMENT E: FEDERAL CLEARANCES





To:

James K. Klein

From:

John D. Baranzelli

By: Thomas C. Brooks

Momas CBrook

Subject:

Natural Resources Review - Update

Date:

April 23, 2015

Archer Elevator Road Sec. 02-00431-00-PV T15N/R6W/S 2 & 11 Sangamon County Sequence # 14072

The proposed project with its revised project limits involves widening and reconstruction of Archer Elevator Road in Springfield between Wabash Road and Greenbriar Drive. The original project had extended north of Greenbriar to Old Jacksonville Road.

There will be three acres of land acquisition. There will not be in-stream work. There will be 90 urban mostly landscape trees removed, including some conifers. Land cover in the vicinity of the proposed improvement is a mixture of urban residential, park lands, and vacant land.

### Review for Illinois Endangered Species Protection and Illinois Natural Areas Preservation – Part 1075

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location. State listed Franklin's ground squirrel records from 2009 and 2010 along the Sangamon Valley bike trail occur 0.5 mile west of the project. There will be no adverse effects on this species due to distance from the project and no suitable habitat in the project area. **Therefore, consultation under Part 1075 is terminated**.

This review for compliance with 17 III. Adm. Code Part 1075 is valid for two years unless new information becomes available that was not previously considered; the proposed improvement is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the proposed improvement has not been implemented within two years of the date of this memorandum, or any of the above listed conditions develop, a new review will be necessary.

#### Review for Illinois Interagency Wetland Policy Act – Part 1090

The National Wetlands Inventory does not show wetlands in the vicinity of the project location. Therefore, the wetland review under Part 1090 is terminated.

#### Review for Endangered Species Act - Section 7

See the attached US Fish and Wildlife Service list of endangered, threatened, proposed and candidate species and proposed and designated critical habitat that may be present within the county in which the proposed project is located. We cross-referenced the preferred habitat of each listed species with our knowledge of the project area and determined that listed species and critical habitat are not present.

Should the proposed improvement be modified or new information indicate listed or proposed species may be affected, consultation or additional coordination should be initiated.

Attachment—USFWS species county list

SDH

# Illinois County Distribution Federally Endangered, Threatened, and Candidate Species

Revised April 2015

County	Species	⊮i status	Habitat
Sangamon  Field Office to Contact: U.S. Fish and Wildlife Service Rock Island Illinois Field Office 1511 47th Avenue Moline, Illinois 61265 (309) 757-5800 e:mail RockIsland@fws.gov FAX: 309-757-5807	Indiana bat (Myotis sodalis)	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)
	Northern long-eared bat Myotis septentrionalis	Threatened	Hibernates in caves and mines - swarming in surrounding wooded areas in autumn. Roosts and forages in upland forests and woods.
	Eastern prairie fringed orchid (Platanthera leucophaea)	Threatened	Mesic to wet prairies
Schuyler  Field Office to Contact: U.S. Fish and Wildlife Service Rock Island Illinois Field	Indiana bat (Myotis sodalis)	Endangered	Caves, mines (hibernacula); small stream corridors with well developed riparian woods; upland forests (foraging)

## CP for Franklin's Ground Squirrel Archer Elevator Rd – Wabash Ave to Greenbriar Dr.

ATTACHMENT F: EDUCATIONAL OUTREACH PLAN



# EDUCATIONAL OUTREACH PLAN FOR THE FRANKLIN'S GROUND SQUIRREL

MITIGATION MEASURE AS PART OF THE CONSERVATION PLAN FOR

ARCHER ELEVATOR ROAD - WABASH AVENUE TO GREENBRIAR DRIVE (CONTRACT NO. 93719)

**APRIL 2019** 

#### PREPARED FOR:

CITY OF SPRINGFIELD OFFICE OF PUBLIC WORKS 800 EAST MONROE SPRINGFIELD, IL 62701

#### PREPARED BY:

CRAWFORD, MURPHY & TILLY, INC. 2750 W WASHINGTON STREET SPRINGFIELD, IL 62702





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ATTACHMENT A: Sample Flier

#### INTRODUCTION

#### **BACKGROUND**

In the summer of 2019, the City of Springfield will begin the reconstruction of Archer Elevator Road between Wabash Avenue to Greenbriar Drive to widen the roadway from a two-lane rural road to a three-lane minor arterial (urban) road with center left-turn lane and dedicated bike lanes in both travel directions. The project corridor is located in southwest Springfield, Sangamon County, Illinois. A population of Franklin's ground squirrel (FGS; *Spermophilus franklinii*) resides along the Sangamon Valley Trail, west of Archer Elevator Road. This population is the largest known colony within the state of Illinois. FGS is currently listed as a State threatened mammal and is protected under the Illinois Endangered Species Protection Act (ESPA).

FGS is a large ground squirrel in the family *Sciuridae* resembling the gray squirrel (*Sciurus carolinenssis*). FGS primarily inhabits the northern Great Plains from Alberta, Canada southeastward to Saskatchewan to Missouri, but its range does extend eastward through northern and central Illinois to northwestern Indiana. In Illinois, the species is present within the northern and central portions of the state, north of Madison and Clark Counties (Hofmann 1998). The decline of FGS is most often attributed to habitat fragmentation and loss as a result of urban development and agricultural expansion and conversion to row crops.

The squirrels are known to disperse through the adjoining agricultural field to the west and forage along Archer Elevator Road, as well as cross back and forth over the roadway. Because of the presence of FGS at the project area, the City applied for Incidental Take Authorization (ITA) of the species to the Illinois Department of Natural Resources (IDNR) in February 2019. A Conservation Plan for the species was developed and submitted concurrently with the ITA. The Conservation Plan included mitigation measures to address the project's impact on FGS. As part of the mitigation measures, the City agreed to develop an Educational Outreach Plan for the neighborhoods near the FGS population at Sangamon Valley Trail, as well as the broader community of City residents and business owners and for users of Archer Elevator Road.

#### PLAN COMPONENTS

This Educational Outreach Plan will detail how the City will complete its proposed mitigation to FGS impacts as a result of the above described project. The Plan's Goal and Objectives detailed below will guide and assist the City in administering this Plan.

The plan has been approved by the IDNR as part of its review of the Conservation Plan that was developed and submitted with the ITA in February 2019. The plan will involve communication to the community via emails through the City's listserv, social media accounts, and outreach to area homeowners associations and stakeholders, such as the neighboring YMCA. The plan will be coupled with the posting of FGS crossing signs, similar to those used on the Sangamon Valley Trail, with speed limit signage along Archer Elevator Road.

Public awareness of the presence of a sensitive state-listed species population should aid in slowing traffic and maintain drivers' awareness along roads, including Archer Elevator Road, to decrease FGS-vehicle collisions.

#### **GOAL**

Develop an increased understanding and awareness by the traveling public of the presence of Franklin's ground squirrel (FGS; *Spermophilus franklinii*) in the vicinity of Archer Elevator Road.

#### **OBJECTIVES**

#### **OBJECTIVE 1**

Develop an informative flier regarding FGS and the project corridor to distribute to neighborhoods and stakeholders within the Archer Elevator Road corridor to encourage drivers to adhere to posted speed limits to limit FGS-vehicle collisions along the project corridor.

- The flier will be developed prior to start of construction (summer/fall 2019).
- The FGS flier that was developed for the Sangamon Valley Trail project in Springfield may be used a guiding example to develop the educational flier for this project:
   <a href="http://springfieldparks.org/docs/Derek/Franklin\_Brochure.docx.pdf">http://springfieldparks.org/docs/Derek/Franklin\_Brochure.docx.pdf</a>. A copy is also provided in Attachment A.

#### **OBJECTIVE 2**

Beginning prior to project construction (summer/fall 2019), educational outreach to the public and adjoining neighborhoods and stakeholders will be initiated.

- a) One informative public community meeting regarding project construction as a whole and, specifically, the presence of FGS along Archer Elevator Road and the importance of adhering to the posted speed limit and maintaining awareness while driving along the project corridor, will be held prior to start of construction (summer/fall 2019). All identified stakeholders (see Mailed Flier Recipients section below) will be invited to the meeting.
  - i. The meeting will be held only once at a facility determined appropriate by the City.
  - ii. Develop a presentation to guide the community meeting at least one week prior to the meeting.
  - iii. Coordinate with each HOA president and stakeholder facility to determine an appropriate meeting date/time and to notify residents of meeting date, time and location.
  - iv. The HOA presidents and the stakeholder managers should encourage residents and interested parties to attend the meeting by at least one week prior to the scheduled meeting.
  - v. The FGS flier will be distributed at the meeting to all attendees.
- b) Distribute/mail the FGS flier to neighborhood residents and stakeholders (see Mailed Flier Recipients section below) within the Archer Elevator Road corridor following completion of construction (winter 2020).
  - i. FGS fliers will be mailed prior to the spring emergence of FGS (April) following project completion.
  - ii. Coordinate with neighborhood HOAs to acquire resident mailing lists.
  - iii. The FGS flier will only be distributed by mail a total of one time.

#### **OBJECTIVE 3**

Following completion of project construction (winter 2020), educational outreach to city residents will be initiated.

- a) Post an electronic copy of the FGS flier on the City's website with a brief summary stating the importance of adhering to the posted speed limit and maintaining awareness while driving along the project corridor to assist with conservation efforts of FGS.
  - i. The website post will be published within one week following project completion.
  - ii. Reminder posts will be published on the City's website yearly every April when FGS come out of hibernation for as long as FGS are still observed utilizing the area along Archer Elevator Road.
  - iii. Coordinate with local FGS population experts at the University of Illinois Springfield and the IDNR on a yearly basis to determine if FGS are still utilizing the area along Archer Elevator Road.
- b) An electronic copy of the FGS flier will also be distributed via the City's email listserv with a brief summary stating the importance of adhering to the posted speed limit and maintaining awareness while driving along the project corridor to assist with conservation efforts of FGS.
  - i. The email will be sent within one week following project completion.
  - ii. Reminder emails will be sent yearly every April when FGS come out of hibernation for as long as FGS are still observed utilizing the area along Archer Elevator Road.
  - iii. Coordinate with local FGS population experts at the University of Illinois Springfield and the IDNR on a yearly basis to determine if FGS are still utilizing the area along Archer Elevator Road.
- c) An educational outreach post with a summary of the FGS flier stating the importance of adhering to the posted speed limit and maintaining awareness while driving along the project corridor to assist with conservation efforts of FGS will be published on all of the City's social media pages (i.e. Facebook, Instagram, Twitter, etc.).
  - i. All social media posts will be published simultaneously within one week following project completion.
  - ii. Each post will include a link to the electronic FGS flier location on the City's website.
  - iii. Educational outreach posts will be published yearly on all of the City's social media accounts every April when FGS come out of hibernation for as long as FGS are still observed utilizing the area along Archer Elevator Road.
  - iv. Coordinate with local FGS population experts at the Univeristy of Illinois Springfield and the IDNR on a yearly basis to determine if FGS are still utilizing the area along Archer Elevator Road.

#### **OBJECTIVE 4**

Measure the effects of the educational outreach plan on citizens' awareness and opinion of the FGS.

- a) A baseline assessment of citizens' current awareness and opinion of FGS will be conducted prior to implementation of educational outreach efforts.
  - i. An electronic online survey will be created and administered via email to the adjacent HOA community members prior to the public meeting. The survey will be open for responses only between initial distribution and up to the public meeting.

- ii. Responses will be tabulated and provided to IDNR.
- b) A second assessment of citizens' awareness and opinion of FGS will be conducted after implementation of educational outreach efforts.
  - i. The survey questions will be adminstered a second time at the end of the outreach campaign following project completion via email to the adjacent HOA community members. The survey will be open for a period of two weeks to collect responses.
  - ii. Responses will be tabluated and compared/assessed against the pre-project survey responses and provided to IDNR.

#### MAILED FLIER RECIPIENTS

RECIPIENT	ADDRESS	
Ralph Hanauer, Ward 10 Alderman and constituents	2704 Dryden Drive, Springfield, IL 62711	
YMCA – Kerasotes Facility and members	4550 W Iles Ave, Springfield, IL 62711	
Cobblestone Estates Homeowners Association and residents	Cole Gay, President, 2720 Dickens Drive, Springfield, Illinois 62711	
Scarborough Place Homeowners Association and residents	Brad Duzan, President, 4108 Tarragon Court, Springfield, Illinois 62711	
Concordia Village – Lutheran Senior Services	4101 W. Iles Ave, Springfield, IL 62711	

#### ESTIMATED PLAN IMPLEMENTATION COST

The following items and their associated cost are expected to be required to implement the Educational Outreach Plan:

- Develop flier (one-time cost) \$250.00
- Distribute fliers (one-time cost) \$500.00
- Hold one public meeting with an educational presentation (cost for meeting and presentation; to be held only once) - \$7,000
  - Of the \$11,500 estimated cost for the public meeting, \$7,000 (61%) will be directly related to the presentation of information about the FGS. Meeting components directly related to the FGS include:
    - Presentation development \$3,500
    - Building rental \$250.00
    - HOA and stakeholder coordination \$1,000
    - Meeting advertisements \$500.00
    - Flier printing \$100.00
    - Printing meeting exhibits/displays \$150.00
    - Meeting attendance \$1,500
- Website and social media post (\$250 yearly cost) \$1,250 (assume 5 years of outreach)
- Develop survey (one-time cost) \$1,000
- Administer electronic online survey via email (two times) \$500.00
- Tabulate and analyze survey results \$2,000

TOTAL IMPLEMENTATION COST - \$12,500

#### **CONTACTS**

#### **City of Springfield**

Office of Public Works
Nathan Bottom, P.E.
(217) 787-2255
Nathan.Bottom@springfield.il.us
800 East Monroe
Springfield, IL 62701

#### **University of Illinois Springfield**

Dr. Tih-Fen Ting, Associate Professor (217) 206-7876

TTing1@uis.edu
One University Plaza
Springfield, Illinois 62703

#### **Illinois Department of Natural Resources**

Jenny Skufca, Incidental Take Authorization Coordinator (217) 557-8243

<u>Jenny.Skufca@Illinois.gov</u>

One Natural Resources Way

#### ATTACHMENT A - SAMPLE FLIER

## The Franklin's ground squirrel in southwest Springfield

In 2010, a population of Franklin's ground squirrels was found to be living along the abandoned railroad bed soon to be converted to the Sangamon Valley Trail. Franklin's often use abandoned railroad beds because they are elevated above the surrounding terrain, allowing their burrows to remain dry. Franklin's hibernate for seven months, from September through mid-April, and require burrow locations that will not flood in early spring.

The ground squirrels survived construction, but lost some habitat, particularly where the railroad bed was graded to street level for crossings. To replace habitat lost during construction, the Springfield Park District, Sangamon County and the developers of Centennial Park Place subdivision worked together to build earthen ridges to serve as places for the animals to burrow.

Now that the Sangamon Valley Trail is finished and the new addition to Centennial Park is nearing completion, a few additional measures are being taken to help the ground squirrels thrive far into the future. This is where we need your help.

For the project to work, some areas must be left unmowed. The Franklin's ground squirrel will not use



mowed turf-grass areas, unlike its cousin, the more common 13-lined ground squirrel.

The 13-lined ground squirrel.

#### Life History

**Identification:** The Franklin's ground squirrel is similar in size to the gray squirrel, but its tail is not as bushy. The back is rusty brown flecked with black. The head is gray, with a broad nose and small ears set back on its head. Adult males weigh just over one pound.

**Reproduction:** The ground squirrels begin mating immediately in mid-spring, and an average of seven young is born in June. Juveniles often are found above ground by mid-July. They must grow to adult size rapidly and gain enough weight to survive the long hibernation. Juveniles enter hibernation in September or as late as early October.

**Diet:** Franklin's ground squirrels are omnivorous, eating plant material, berries, insects, bird eggs and carrion. You may surprise one feeding in a blackberry thicket. Listen for the whistling alarm call.

**Habitat:** Once thought to be strictly a prairie species, the Franklin's ground squirrel is now considered to be an animal of forest edges and transition areas between forest and open grassland. They are found along the open parts of the Sangamon Valley Trail and are less likely to use sections where trees canopy over the trail. They also are found in fencerows and field edges.

**Hibernation:** Franklin's ground squirrels are true hibernators. Adults hibernate from late August/early September until mid-April in central Illinois.

**Lifespan:** Males live one to two years, females three to five years.

**Status:** The Franklin's ground squirrel is listed as a threatened species in Illinois because of habitat loss and isolation of remaining populations.



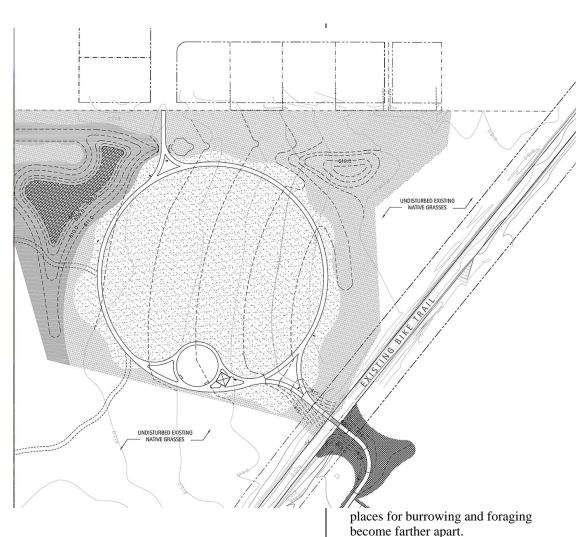
## Help us conserve the Franklin's ground squirrel

In and around Centennial Park and along the Sangamon Valley Trail

The Franklin's ground squirrel (*Poliocitellus* franklinii) is a state-threatened species that lives along the Sangamon Valley Trail between Bunker Hill Road and Archery Elevator Road. It also lives along the undeveloped portions of the railroad bed south of Springfield. It is the largest concentration of Franklin's ground squirrels known in the state.

Many partners worked together to protect the ground squirrels before, during and after construction of the SVT and Centennial Park addition, including Sangamon County, the Springfield Park District, Illinois Department of Natural Resources, Friends of the Sangamon Valley and the University of Illinois Springfield.

Now we need your help.



# MANICURED LAWN SEED MIX LOW-PROFILE PRAIRIE SEED MIX WET-TO-MESIC PRAIRIE SEED MIX WETLAND PLUGS LAWN SEED REPAIR

Centennial Park addition: Shaded areas will be planted with prairie grasses and wildflowers.



gradually became usable. The Illinois DNR has an agreement with the developer to keep the new berm un-mowed. The Springfield Park District and Sangamon County have agreed to limit mowing to the shoulder of the bike trail.

## Q: Why does the planting appear weedy?

Prairie wildflowers and grasses take time to become established. Plantings often look rough or weedy in the first year or so as plants send down deep roots before sending up wildflowers.

## Q: Why can't the ground squirrels just use the prairie?

They can and they do. However, the prairie alone probably is not enough. The Franklin's found prior to

construction of the SVT burrowed into the raised railroad bed. Previous attempts to release Franklin's ground squirrels into reconstructed Illinois prairies were not successful. The combination of burrowing habitat and places to forage for food, like the Centennial Park Prairie, seem to be a good combination. Please help us preserve the ground squirrels, and other wildlife using the area.

#### Q: Why is the Franklin's ground squirrel rare?

The Franklin's ground squirrel has declined at the southeast portion of its range, including Illinois and Indiana due to loss of prairie and savanna habitat. Remaining populations become isolated as suitable

### Q: Why can't I mow the right of way or berm near my house?

The ground squirrels will not use mowed areas. Franklin's were found in 2007 along the Wabash Trail. When homeowners began to mow and garden in the right of way after the trail was built, the habitat

Source: "Response of the Franklin's Ground Squirrel to Recreational Trail Development in Springfield, Illinois," Masters thesis by Christopher Young, University of Illinois Springfield, Dec. 2012.

## CP for Franklin's Ground Squirrel Archer Elevator Rd – Wabash Ave to Greenbriar Dr.

ATTACHMENT G: DRAFT PUBLIC NOTICE



#### Public Notice is hereby given that:

The City of Springfield, Department of Public Works (800 East Monroe, Springfield, IL 62701), pursuant to the Illinois Endangered Species Protection Act, has requested from the Illinois Department of Natural Resources (IDNR) authorization for an Incidental Take for Franklin's ground squirrels (*Spermophilus franklinii*) which, through initial review, has been determined to be present in the vicinity of the proposed Archer Elevator Road – Wabash Avenue to Greenbriar Drive widening project in Springfield, Sangamon County, Illinois.

This proposed project involves the widening and reconstruction of Archer Elevator Road from HPR Road/Yucan Drive to Lavender Lane and from approximately 600 feet south of Barrington Drive to approximately 300 feet north of Greenbriar Drive. The project is located completely within existing public right-of-way.

Included in this request is a conservation plan designed to minimize and mitigate the effects of said development. This plan includes, but is not limited to, reducing the roadways posted speed limit, implementing procedures during construction to monitor for the presence of and limit impact to the species, funding local habitat restoration efforts, and conducting public outreach post-construction to educate residents of the presence of the species. The entire proposal (ITA #195) is available for inspection at the Lincoln Library located at the corner of 7<sup>th</sup> Street and Capitol Avenue, Springfield, Illinois and on the IDNR Incidental Take Authorizations – Issued and Pending webpage

(https://www.dnr.illinois.gov/conservation/NaturalHeritage/Pages/Incidental-Take-Authorizations.aspx).

Comments on the conservation plan may be submitted to:

Illinois Department of Natural Resources One Natural Resource Way Springfield, IL 62702-1271 DNR.ITACoordinator@illinois.gov

All written comments must be received no later than July 11, 2019, 30 days from last publication.