

AT A GLANCE

Applicant:
Rebecca and Dylon Sease

Case Number:
24-02

Location:
5600 Barkley

Project Name:
Covered Porch Addition

Property ID:
KP02600000 0006

Project Summary:
Owners of a single-family home at 5600 Barkley request approval of a covered porch that encroaches into the front yard setback in an R-1 “Single-Family Residential” zone.

Current Zoning:
R-1

Proposed Zoning:
N/A

Current Land Use:
Single-Family Residential

Staff Contact:
Karie Kneller, City Planner

Proposed Land Use:
N/A

N/A Public Hearing Required

Legal Notice:
N/A



PROPERTY BACKGROUND AND INFORMATION

The owners/applicants for the property at 5600 Barkley Street request approval of a covered front porch addition attached to the front facade of their home.

The subject property is a single-family residence on the corner of 56th Street and Barkley Street at 5600 Barkley. The property is zoned R-1 "Single-Family Residential." Property frontage on Barkley is a 50-foot-wide lot and the side yard facing 56th Street is 131 feet wide, for a total 10,480 square-foot lot. The building footprint, including attached garage, is approximately 2,250 square feet with a 35-foot front setback, a 41-foot backyard setback, a 12-foot side yard setback on 56th Street, and a 6-foot interior side yard setback.

PROJECT PROPOSAL

The proposed front porch is 10' by 38', constructed of 2" by 8" floor joists, 6" by 6" posts on 12" by 36" piers. Ceiling joists are 2" by 6", tied to 2" by 8" rafters, 8' high from floor elevation. The proposed black metal standing seam roof over the composite deck has a 3/12 slope. A slate-type grey low stone wall surrounds the open porch with five natural wood beam posts.

PLAN REVIEW AND ANALYSIS

Section 410.010(D)(1-5) of Mission's Municipal Code states that front yard setbacks shall be at least 30 feet. The setback may be reduced to 20 feet if the following conditions are met:

1. "Setback reduction is for an attached living area or covered porch to the principal structure...which does not exceed a total of 120 square feet above grade finished livable space."

Analysis: The covered front porch is not enclosed, and therefore cannot be considered finished, livable space; the 120 square-foot stipulation does not apply.

2. "The exterior materials of the proposed...porch are consistent or complementary in color, texture and quality with those visible at the front of the dwelling."

Analysis: It is Staff's determination that the materials are complementary in color, texture, and quality with those visible at the front of the dwelling.

3. "The roof and design of the proposed...porch is properly proportioned to and integrated with the dwelling."

Analysis: It is Staff's determination that the roof line of the porch is proportionate to the primary structure roof line, and will be sufficiently integrated with the dwelling.

4. "Plans are approved by the Planning Commission."

Analysis: The Planning Commission will approve or deny the application upon a majority vote.

5. “The structure does not adversely affect drainage on the lot or neighboring properties.”

Analysis: Staff does not anticipate storm water or drainage issues. The existing building footprint is approximately 21% of the total lot coverage; stipulations require a maximum of 35% coverage, including the garage. The total building footprint with the additional covered porch is 22% of the total lot.

RECOMMENDATION

Staff recommends that the Planning Commission approve the application for Case #24-02, 5600 Barkley - Covered Porch Addition.

PLANNING COMMISSION ACTION

The Planning Commission will hear Case #24-02 at its February 26, 2024 meeting.

CITY COUNCIL ACTION

No action.



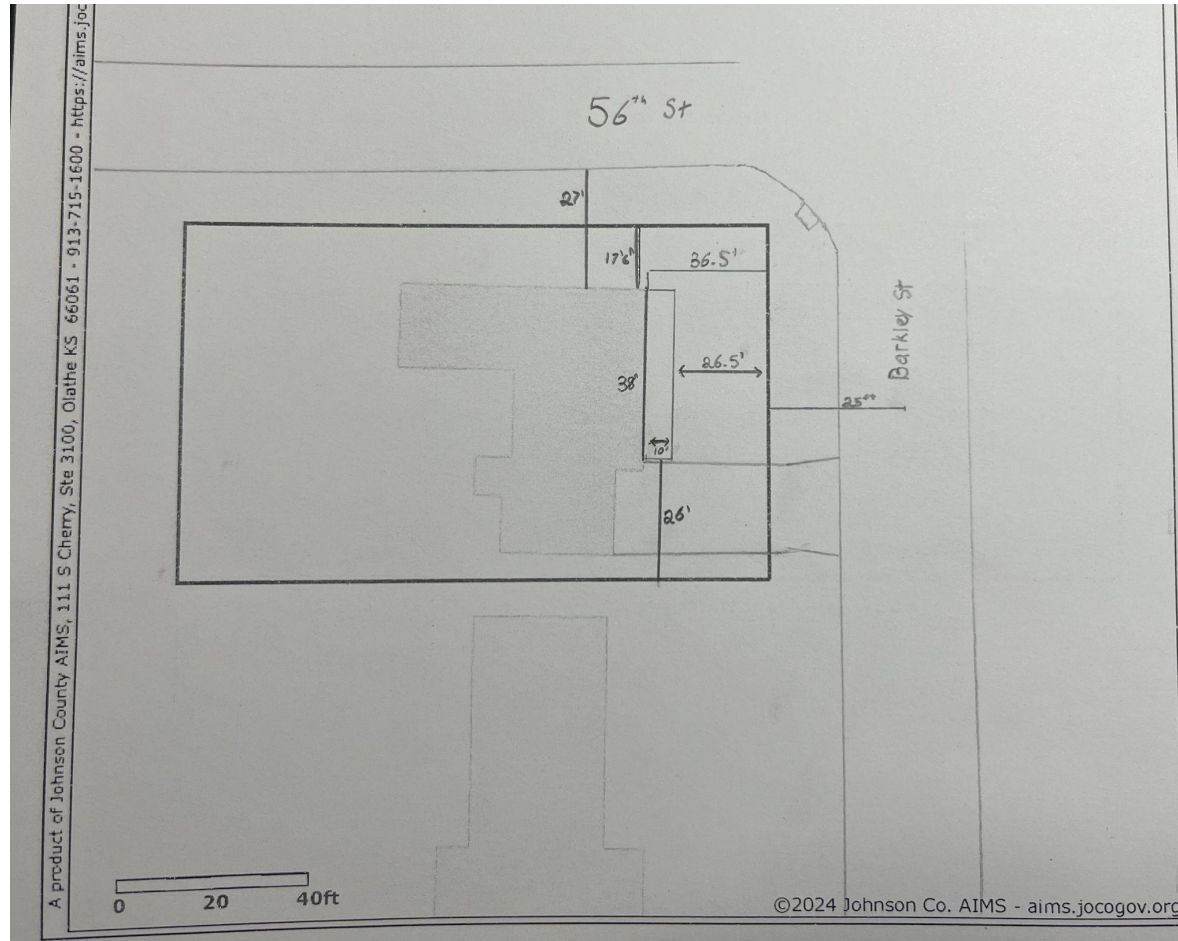
Covered Front Deck

A porch is a place of connection,
a place where strangers become friends
and friends become family.

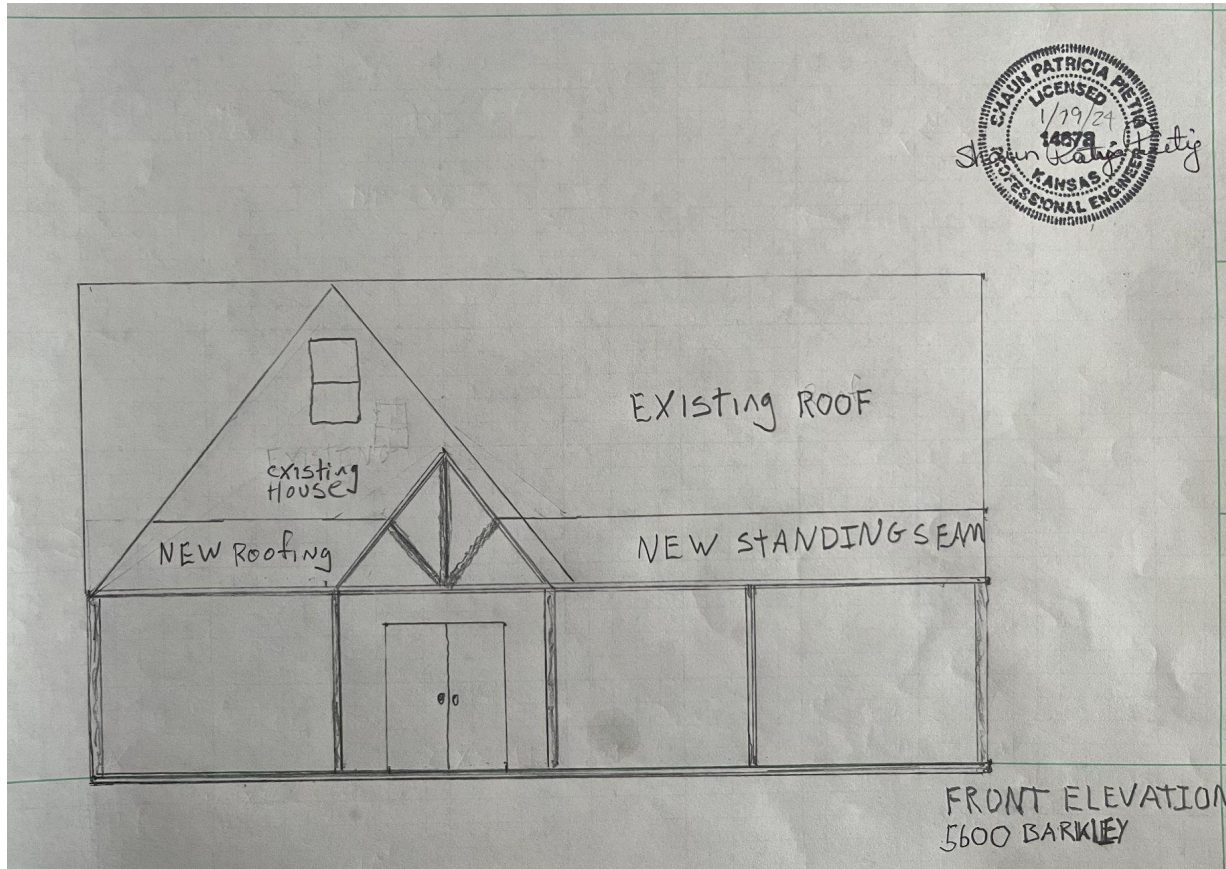
Satellite Map of Site



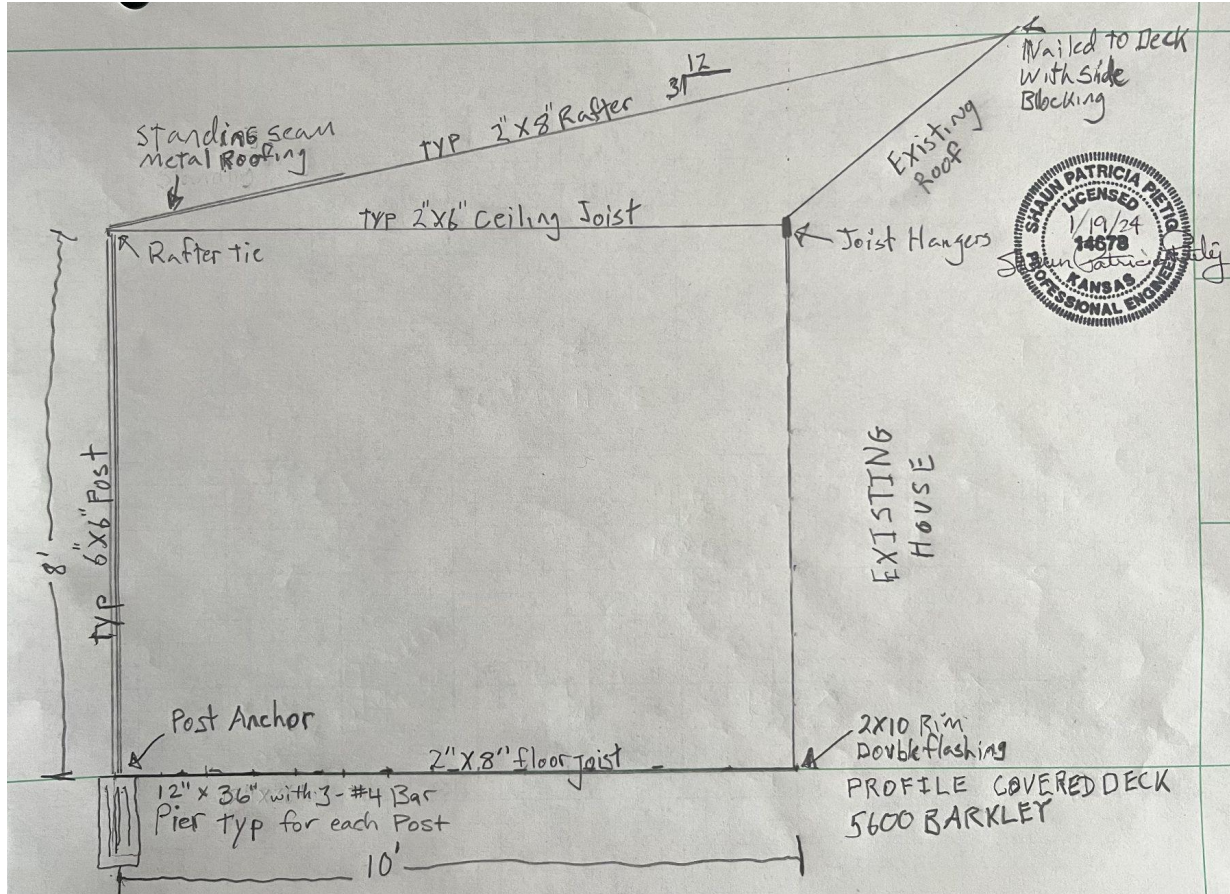
Site Plan



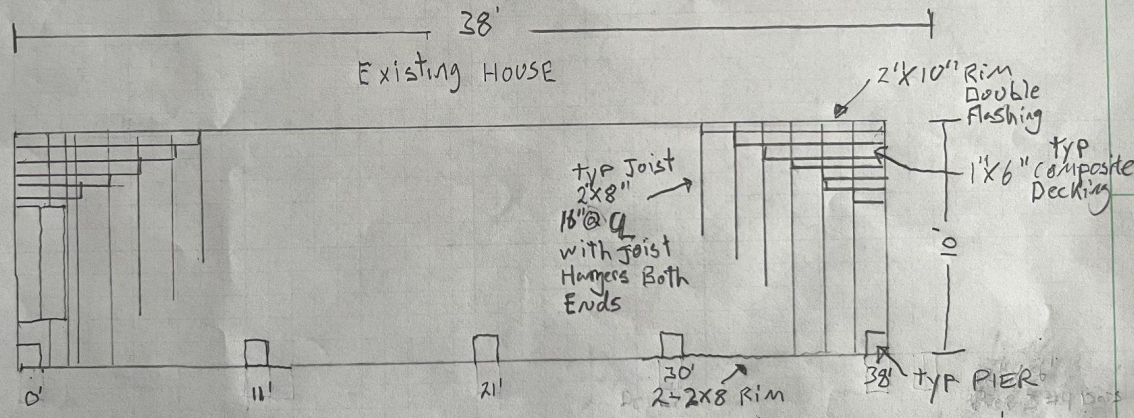
Front Elevation



Profile Covered Deck

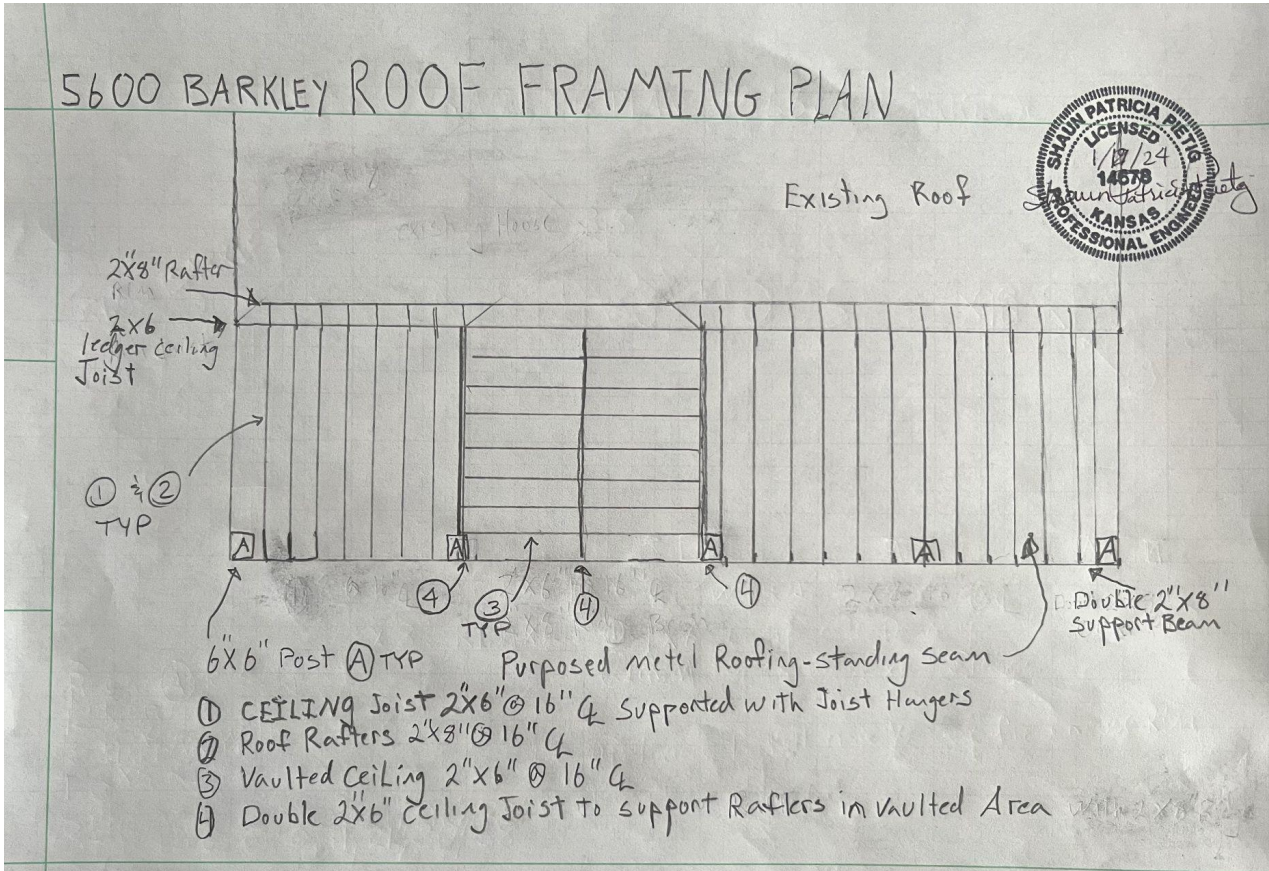


Deck Framing Plan



5600 BARKLEY
DECK FRAMING
PLAN

Roof Framing Plan



Estimated rendering*



56th Street

Barkley Street

*see following slides for material examples to be used for roofing and stone

Estimated rendering*



*see following slides for material examples to be used for roofing and stone

Estimated rendering*



*see following slides for material examples to be used for roofing and stone

Roofing Material

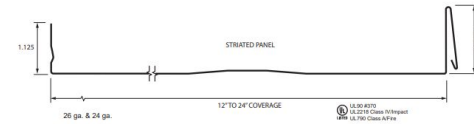
- SL15 Panel - In Black

STRONGSEAM
PANELS **SL15 PANEL**



AT A GLANCE:

- 16" coverage, 26 ga.
- 12", 16" & 18" coverage, 24 ga.
- 1 1/2" snaplock rib
- Minimum slope 3:12
- Requires solid decking
- 22 WXL stock colors, plus galvalume, 26 ga.
- 32 PVDF stock colors, plus galvalume and glossy white, 24 ga.
- UL Class A Fire rating
- UL Class IV Impact rating



Stone material

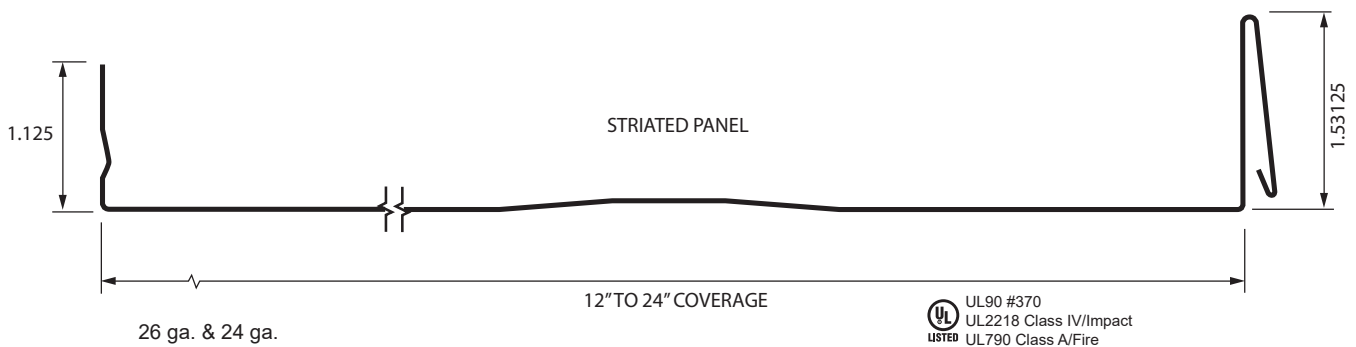


STRONGSEAM™
PANELS **SL15 PANEL**



AT A GLANCE:

- 16" coverage, 26 ga.
- 12", 16" & 18" coverage, 24 ga.
- 1 ½" snaplock rib
- Minimum slope 3:12
- Requires solid decking
- 22 WXL stock colors, plus galvalume, 26 ga.
- 32 PVDF stock colors, plus galvalume and glossy white, 24 ga.
- UL Class A Fire rating
- UL Class IV Impact rating



SL15 Panel -- is a snap-together architectural panel with a 1½" standing seam, typically used over a solid deck. Available in both 26 ga. and 24 ga. Minimum recommended slope is 3:12. Pan striations required for all 26 ga. panels.

AT A GLANCE

Applicant:
City of Mission, KS Parks + Recreation
Department / Confluence

Case Number:
24-01

Location:
6649 Lamar

Project Name:
Mohawk Park Phase II Final Development Plan

Property ID:
KP22500008 0006

Project Summary:
The City of Mission Parks + Recreation Department submitted a final development plan for phase two of park improvements at Mohawk Park. Improvements include new trail, playground equipment, pickleball court with half-court basketball, and parallel on-street parking. The plan includes landscaping and preserved sports fields.

Current Zoning:
R-1

Proposed Zoning:
N/A

Current Land Use:
Park

Staff Contact:
Karie Kneller, City Planner

Proposed Land Use:
N/A

N/A Public Hearing Required

Legal Notice:
N/A



PROPERTY BACKGROUND AND INFORMATION

The subject property, Mohawk Park, is owned by the City of Mission and managed by the Parks and Recreation Department. It is located at 6649 Lamar Avenue, on the northeast corner of 67th Street and Lamar Avenue. The parcel is bounded by Horton Drive on the east and residential properties on the north. It is located at the southernmost border of Mission, with the boundary of Overland Park across 67th Street to the south and Lamar to the west. The property and surrounding neighborhood is zoned “R-1” Single-Family Residential District and Mohawk Park is enveloped by residential single-family homes. The Millhaven neighborhood in Mission is adjacent to the property on the northeast. The Walmer, Southmoor Gardens, and Highland Plains neighborhoods in Overland Park are adjacent to the west and south of the property.

Terrain is relatively flat, with the highest point in the northwest and water runoff generally draining to the west and south. There is a gradual 10-foot elevation change across the almost 8-acre site. Existing stormwater inlets at the northwest and southern borders of the property capture stormwater runoff from the site. The site has access to water, sewer, and electrical utilities.

The first phase of Mohawk Park improvements were completed in August 2023, which included amenities such as bathrooms, a covered pavilion, parking lot, and landscaping. Phase two of the Mohawk Park improvements were dependent upon the sales tax approval in 2022. The City issued bonds to pay for park improvements in the same year. The Parks + Recreation Department contracted Confluence to develop a second phase of improvements with a budget that the City Council’s Finance and Administration Committee initially approved with the adopted package of park improvements in 2023. The design of the phase two improvements are based on the previously determined budgetary constraints. During the Phase I development approval, the Planning Commission and attendees from the public provided input that expressed a priority for universal and inclusive design in the playground equipment and safe crossings where the trail intersected the vehicular entrance. The site has had some stormwater drainage issues in the past, and these issues were also a concern during the Phase I design process.

PROJECT PROPOSAL

The project proposal will realign the current walking trail and provide a ten-foot trail loop around and throughout the site. New playground equipment will be constructed to the east of the phase one pavilion and restrooms, and a combined half-court basketball and pickleball sport court is proposed to the east of the new playground. Chain link fencing around the sport court will be coated with black vinyl.

The existing playground will be removed, and the proposed playground will be designed with universal design features. ADA features such as a “crow’s nest” play area, swing, and accessible ramp are included in the proposal, as well as sensory equipment for additional universal inclusivity. Sensory equipment may include musical chimes and communication board with symbols. Poured in place rubber surfacing is designed with ADA considerations for sloped entry. Proposed play equipment is proposed for children

aged 2-5 and 5-12. The proposal includes six benches beneath 12'X12' hyperbolic umbrellas at an 8' height. Features throughout the playground provide intermittent shade.

An existing parking and drive loop in the northeast corner of the site will be replaced with landscaping and open space, with 12 new proposed parallel on-street parking spaces along Horton Street. The proposed impervious surface, including new playground, sport court, trail, and parallel parking, will increase the existing impervious area from Phase I conditions, but will decrease the impervious area from the conditions when the site was originally developed as a school in the 1950's. Proposed stormwater BMP (Best Management Practice) detention areas that were part of Phase I plans have been eliminated in Phase II. Stormwater calculations indicate that the existing infrastructure is sufficient to manage runoff without necessitating additional stormwater capture on-site. The south parking lot has incorporated drainage tie-in with an existing stormwater inlet near the vehicular entrance on 67th Street.

Landscaping will be native to northeast Kansas. The proposal includes a variety of shade trees, ornamental trees, conifer trees, and native grasses including a meadow mix within areas in the northernmost areas of the site. Fescue grass will be planted in other landscaped areas, including on the west, south, and in narrow strips around the playground and sport court areas, as well as on the east side of the existing parking lot.

PLAN REVIEW AND ANALYSIS

Mission Comprehensive Plan (2007)

The Comprehensive Plan recommends preserving open green spaces in Mission and maintaining existing parks and recreation facilities. These amenities promote neighborhood stability, public health and safety, provide outdoor recreation opportunities as well as visual enjoyment, and promote environmental benefits such as carbon capture, air and water purification, and wildlife habitat. The City has committed to the maintenance and enhancement of its existing parklands. The Plan also calls for sustainability practices and building standards for facilities that align with Leadership in Energy and Environmental Design (LEED) principles and practices.

Parks and Recreation Master Plan (2018)

The Parks and Recreation Master Plan recommends implementing the following improvements for Mohawk Park that are included in this proposal:

- Redesign Mohawk Park in a way that reconfigures the playing fields to allow for the same programs, but in a more efficient manner (high priority)
- Design and construct a permanent shelter that includes restrooms, a storage facility, and water fountain stations (medium priority, completed in phase one)

- Replace and expand existing site furnishings (medium priority).

The Mohawk Phase II proposal incorporates many of the elements that were discussed by members of the Planning Commission during the first phase of improvements, as well as the features that residents and stakeholders recommended. These include the following:

- Noise buffer through installment of evergreen landscaping around the pickleball courts
- Resident request to add pawpaw trees as native, fruit-bearing landscaping
- Landscaping is native to northeast Kansas
- Traffic study is not requested at the time of this project and would be associated with Public Works project(s)
- Contractor will provide dust control measures for the site during construction in accordance with regulations cited at §550.520

Mission Municipal Code

Consideration of Final Development Plans is outlined in the Mission Municipal Code at §440.190. A Final Development Plan which contains modifications from the approved Preliminary Development Plan but is in substantial compliance with the Preliminary Development Plan, may be approved by the Planning Commission without a public hearing if the landscaping and screening plan is adequate as determined by the Commission.

Stormwater Study and Memo

The City of Mission's third-party engineering consultant, GBA, reviewed the stormwater memo and concluded that impervious surface does not exceed the impervious calculations from the time the elementary school was located on the site. Runoff will be reduced from the historic conditions.

Analysis

The plan conforms with the adopted Comprehensive Plan and the Parks and Recreation Master Plan by including preservation of green space and maintaining existing parks and recreation facilities. Mohawk Park is enhanced by the phase two proposed improvements to include practices that promote sustainability practices. The unprogrammed playing fields are also preserved and promote more efficient use of space. Additional furnishings such as park benches, shade structures, and play equipment is part of the expanded improvements on the site. Irrigation conduit will be included during construction so that a watering system may be installed at a later date should the need arise.

Modifications are not significant and are in compliance with the municipal code. The final development code includes details for landscaping that specify native species. The applicant and design team considered Planning Commission, City Council, and public input in its final design. The proposed pickleball/basketball courts will be surrounded by evergreen shrubbery (*arbor vitae*) to dampen sound

that may reach the park's property lines. Staff also requested that ADA parking and ramps would not be included within the parallel parking area along Horton and an additional ADA parking space would be included in the main parking lot on the south side of the property.

GBA concluded that the reduction from historic runoff calculations would not increase the impact to stormwater infrastructure on-site or downstream.

RECOMMENDATION

Staff recommends approval of the Mohawk Park Phase II final development plan.

PLANNING COMMISSION ACTION

The Planning Commission will hear Case #24-01 at its meeting on February 19, 2024.

CITY COUNCIL ACTION

No action required.

**MOHAWK PARK PHASE 2
6649 LAMAR STREET
MISSION, KS 66202**

Confluence

Project No. 23093

September 2023 to March 2024

Project narrative

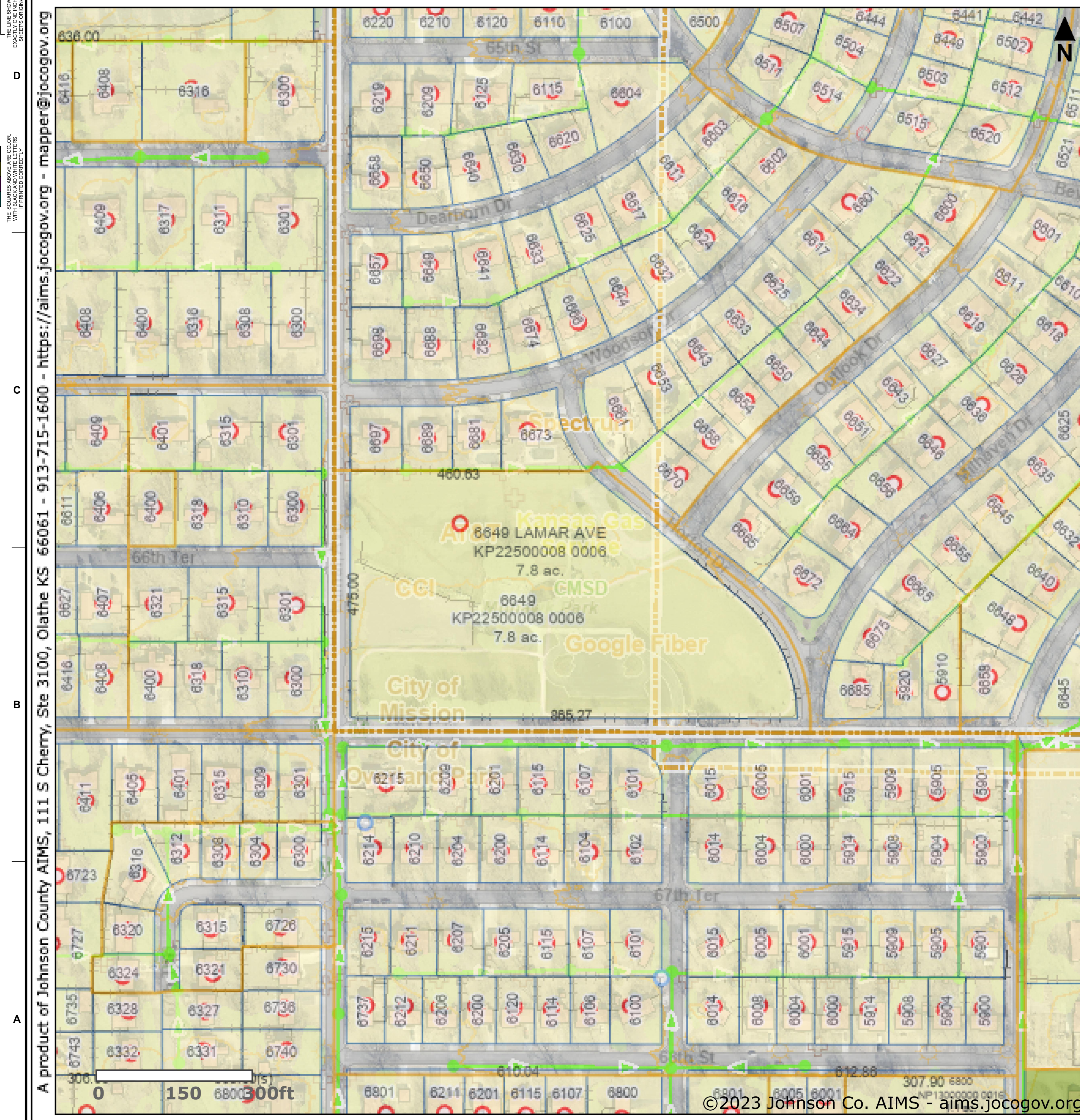
The project site consists of the 7.82 acre city-owned tract located along 67th Street and between Lamar Street and Horton Street in Mission, KS. The property currently consists of an existing public park with accompanying playground, trails and open space areas. The second phase of work will consist of a primary loop trail around the site, incorporating parallel parking on the northern edge. A half-court basketball / 2 pickleball courts that is placed just off of the new parking lot. Additionally, a new all-inclusive playground boasting a large attraction of play equipment will be installed near the parking lot and shelter. Finally, a planting plan incorporating shade and vibrant plants will surround the site and provide interest in addition to the play fields.

DESCRIPTION OF WORK - PHASE 2:

The second phase of work for the project will consist of the sequence indicated below.

- Install perimeter erosion control measures and tree protection fencing.
- install temporary construction entrance around site.
- install temporary swales and diversion berms, with rock check dams and silt fencing where necessary.
- remove trees and clear and grub initial work areas.
- remove existing parking drive off of horton st.
- remove additional existing pavement in accordance with plans.
- remove existing play area
- install erosion control measures around storm sewers.
- install intermediate silt fences on slopes as embankment occurs across site temporarily seed areas downstream.
- mass grade permanent berms, play fields, and loop trail
- install loop trail and sport court
- install perimeter curb and gutter and base course of asphalt in perimeter drive area.
- install additional erosion control measures at toes of slope adjacent to curb line as applicable.
- complete final grading, seed/sod, and landscape perimeter areas.
- install surface course on parking drive, walks and flatwork.
- install playground/surfacing per manufacturer instructions
- complete final grading and sod/landscape around site and sidewalk areas.
- final site cleanup.
- maintain erosion control measures until site is stabilized.
- inspect and reseed remaining disturbed areas, washouts, etc.
- remove sediment buildup, reseed and stabilize as erosion control measures are removed.

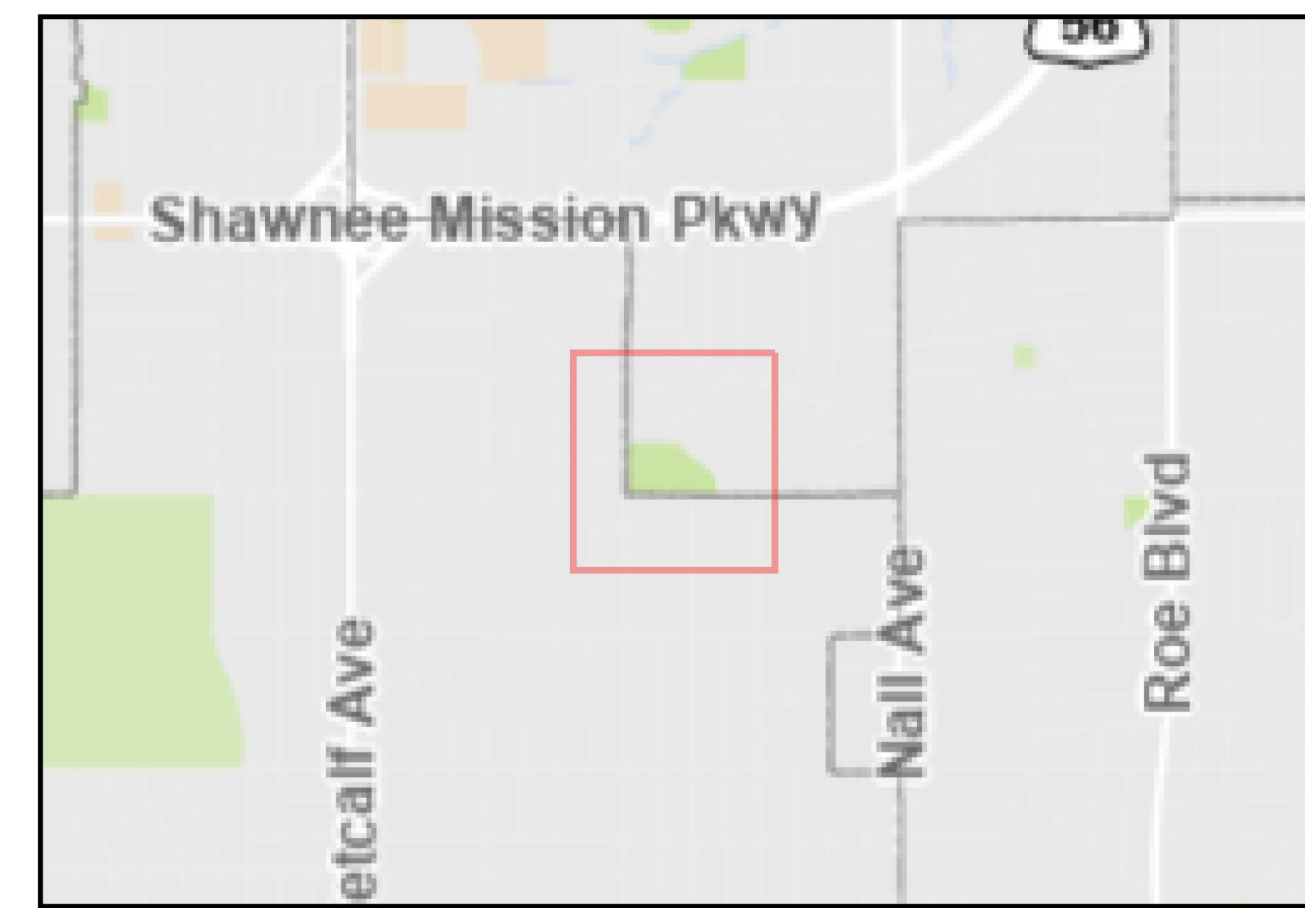
THE LINE SHOWN ABOVE IS
 EITHER A PLAT OR LOT LINE
 OR A COMBINATION THEREOF.
 THE SQUARES ABOVE ARE COLOR
 CODED TO INDICATE PROPERTY
 TYPE. SEE LEGEND FOR MORE
 INFORMATION.
 IF PROVIDED CORRECTLY,
 THIS MAP IS A PUBLIC RECORD.
 C M Y K



Johnson Co AIMS Map

LEGEND

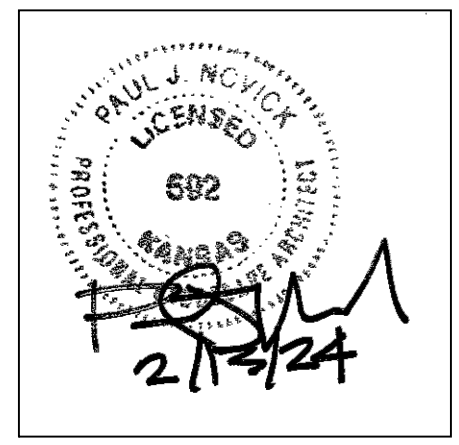
- Address Point
- Address Point - Other
- Parcel Line
 - Plat
 - Lot Line
 - Original Lot
- + Address Point
- Building/Structure
- Property
 - Untaxed
 - Common Interest
 - Vertical
 - Platted
 - Unplatted
 - Right-of-way
 - Mineral Rights
 - Leased Land



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9/26/2023



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

01 PLANIMETRICS
 SP001



MOHAWK PARK PHASE 2
 MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANIMETRICS

SP001

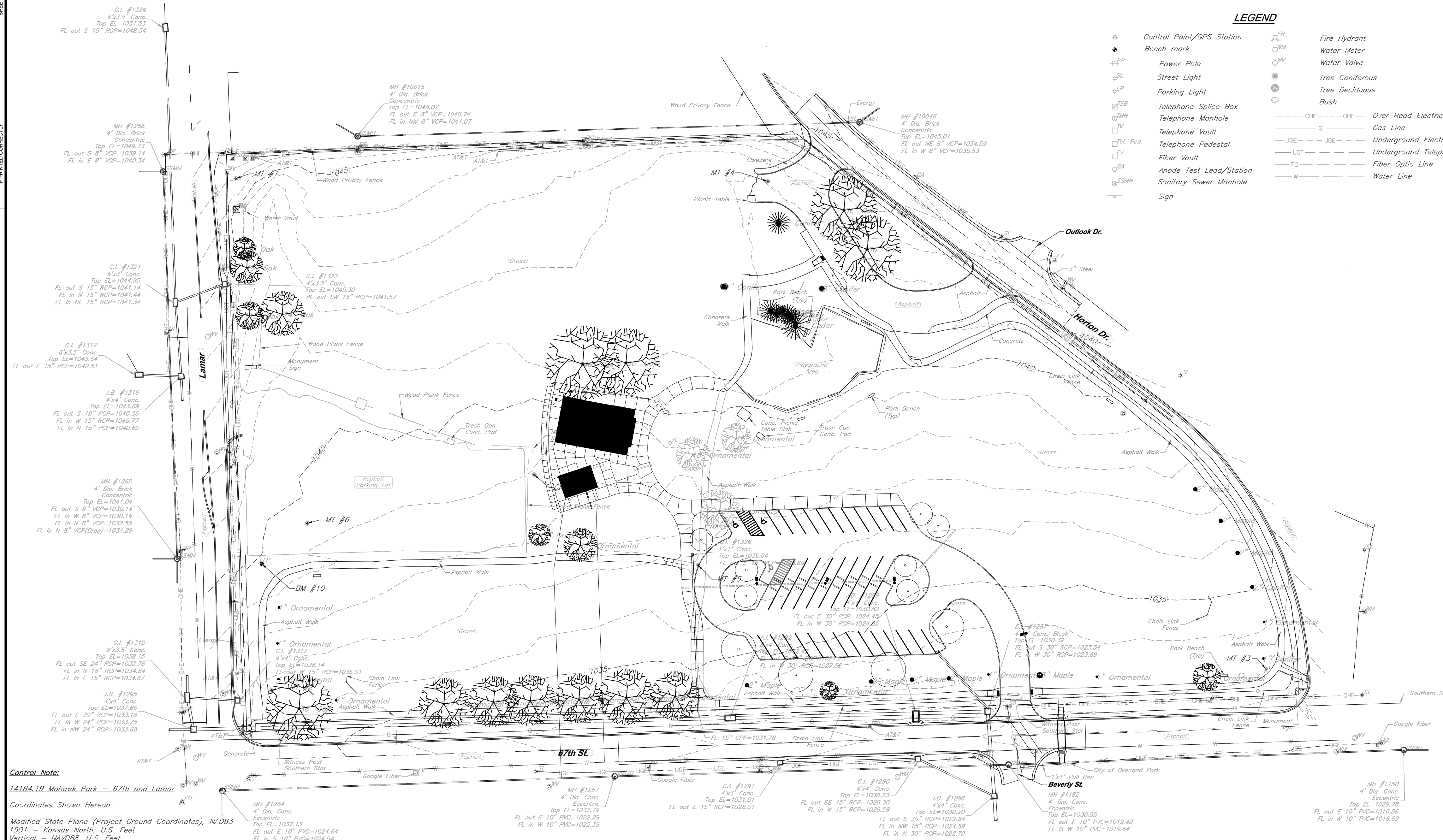
THE LINE SHOWN ABOVE IS THE ORIGINAL SIZE OF THE SHEETS.
 THE SQUARES ABOVE ARE COLOR MATCH POINTS.
 IF PRINTED CORRECTLY, THE SQUARES SHOULD BE SQUARES.

D

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B

A



LEGEND

●	Control Point/GPS Station	⊕	Fire Hydrant
◆	Bench mark	⊙	Water Meter
⊕	Power Pole	⊙	Water Valve
⊙	Street Light	⊙	Tree Coniferous
⊙	Parking Light	⊙	Tree Deciduous
⊙	Telephone Splice Box	⊙	Bush
⊙	Telephone Manhole	---	Over Head Electric
⊙	Telephone Vault	---	Gas Line
⊙	Telephone Pedestal	---	Underground Electric
⊙	Fiber Vault	---	Underground Telephone
⊙	Anode Test Lead/Station	---	Fiber Optic Line
⊙	Sanitary Sewer Manhole	---	Water Line
⊙	Sign		

Control Note:
 14184.19 Mohawk Park - 67th and Lamar

Coordinates Shown Hereon:
 Modified State Plane (Project Ground Coordinates), NAD83
 1501 - Kansas North, U.S. Feet
 Vertical - NAVD83, U.S. Feet

CAF = 0.9999211
 To get to State Plane:
 Coordinates x CAF = State Plane

CP #100 - Set 1/2" bar Near the Northeast Corner of Parking Lot of Mohawk Park
 Ties:
 1. 23.09 feet North Northwest of Duplex Nail Top of Centerline of Wood Plank Fence Corner Post
 2. 5.50 feet West Southwest of Duplex Nail Top of Centerline of Wood Plank Fence Corner Post
 3. 8.45 feet West of East Edge of Asphalt Parking Lot
 Coordinates:
 N: 263367.175
 E: 2262139.538
 EL: 1038.653

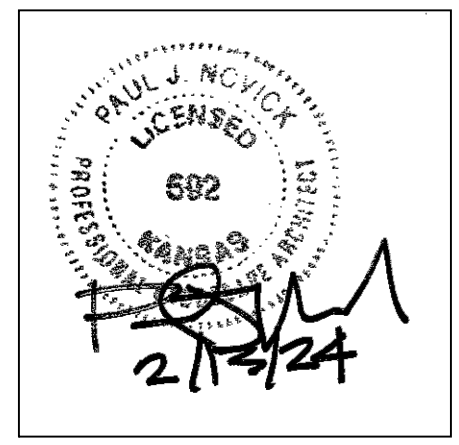
BM #10 - Set chiseled "x" cut Top Southeast of Corner Concrete, Base of Parking Light Pole at Southwest Corner of the West Parking Lot of Mohawk Park
 Coordinates:
 N: 263293.318
 E: 2261915.234
 EL: 1041.201

MT #1 - Found 1/2" bar set at Northwest of Corner Property of Mohawk Park
 Ties:
 1. 22.10 feet Northeast of Top Southeast Corner of most East Concrete Base of AT&T Splice Boxes
 2. 14.29 feet North of Top Southeast Corner of most West Concrete Base of AT&T Splice Boxes
 3. 5.84 feet West Northwest of Top Southeast Corner of most Southwest AT&T Telephone Vault
 4. 28.30 feet South of Top Southeast Corner of Water Vault
 Coordinates:
 N: 263611.339
 E: 2261893.430
 EL: 1047.214

MT #2 - Found 1/2" bar set Near the Southwest Corner of Park Property, Northeast Corner of Intersection of 67th and Lamar
 Ties:
 1. 10.67 feet Northeast Near side of 1" Tree
 2. 2.90 feet West of East Edge of Asphalt Walk
 3. 25.57 feet South Southwest of Centerline of Gatepost at Walk
 Coordinates:
 N: 263189.127
 E: 2261923.166
 EL: 1036.748

MT #3 - Found 1/2" bar set at Southeast Corner of Park Property, Northwest Corner of Intersection of 67th and Horton Drive
 Ties:
 1. 9.08 feet North Northwest Near side of 1" Cedar Tree
 2. 4.39 feet East of West Edge of Asphalt Walk
 3. 23.27 feet East of Centerline of North most Chainlink Gate post
 4. 52.00 feet East of Centerline of Horton Drive
 Coordinates:
 N: 263206.836
 E: 2262743.403
 EL: 1033.139

MT #4 - Found Mag and Shiner set at Northwest Corner of the East Parking Lot of Mohawk Park
 Ties:
 1. 11.15 feet Northwest of Back of Curb at End of Concrete Walk
 2. 10.50 feet West of West Edge of Asphalt Parking Lot
 3. 75.00 feet East of Centerline of Horton Drive
 Coordinates:
 N: 263608.993
 E: 2262332.634
 EL: 1040.876



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2
 MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

SURVEY

SP100

01 SURVEY



THE LINE SHOWN ABOVE IS
 EITHER A PROPERTY LINE OR
 SHEET'S ORIGINAL PLANT SIZE

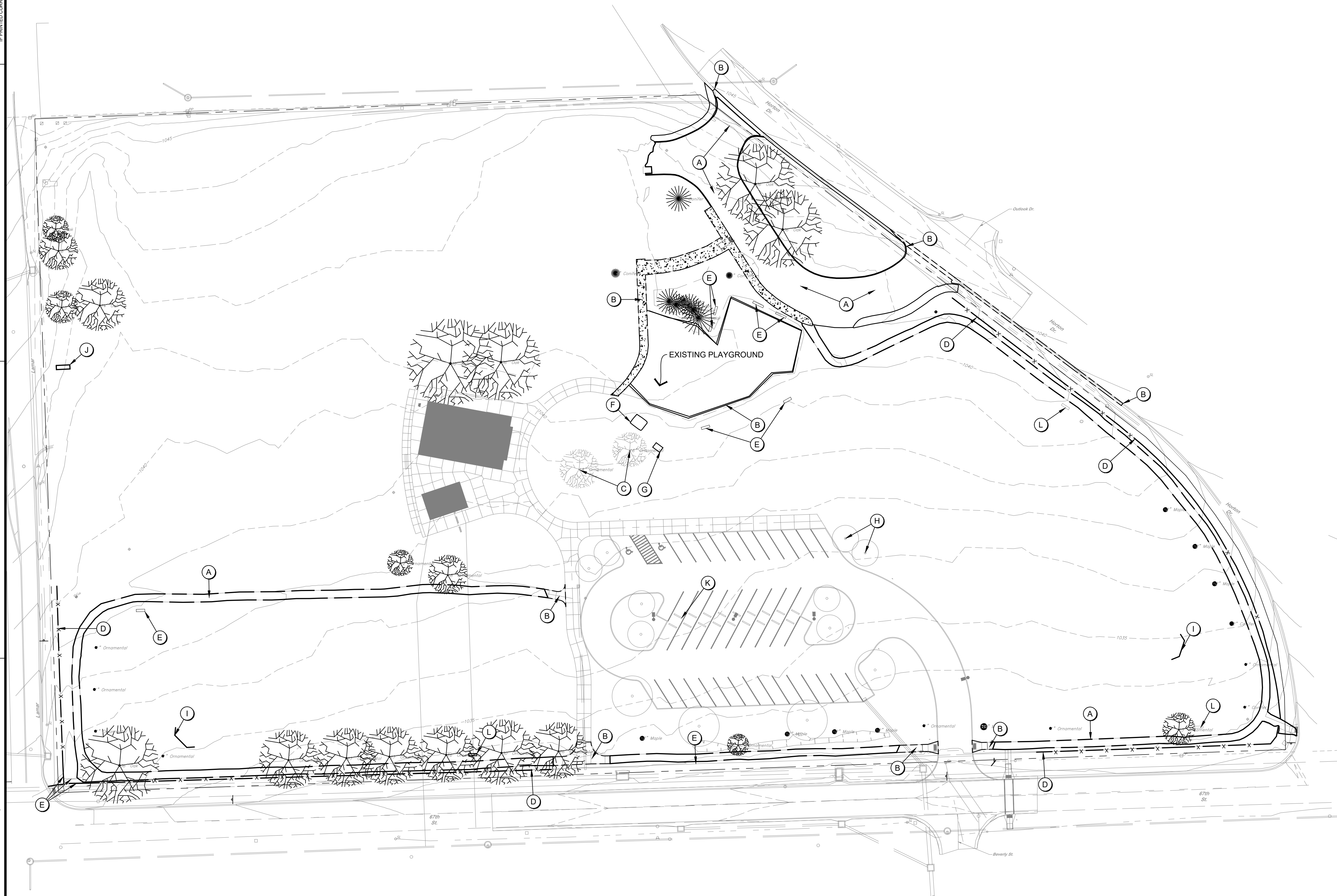
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THE SQUARES ABOVE ARE COLOR
 WITH PRINTING TO MATCH THESE
 IF PRINTED CORRECTLY

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DEMOLITION GENERAL NOTES

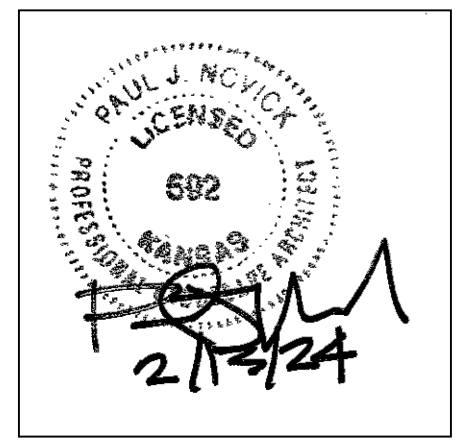
- A. PRIOR TO ANY EXCAVATION AT THE SITE, CONTRACTOR SHALL CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANIES REPRESENTATIVES TO DETERMINE POSSIBLE UTILITY LOCATIONS AND DEPTHS. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE RESULTING FROM FAILURE TO COMPLY WITH THIS REQUIREMENT. REPORT ANY DAMAGE TO EXISTING UTILITIES PRIOR TO REPAIR. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER OF THE UTILITY.
- B. FIELD VERIFY EXISTING GRADES AND LOCATIONS OF EXISTING UTILITIES, CONDUIT, LINES, POLES, TREES, PAVING, BUILDING AND OTHER SITE STRUCTURES PRIOR TO DEMOLITION OR CONSTRUCTION AND IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. THE CONTRACTOR SHALL REPORT TO THE OWNER ANY DAMAGE TO OWNER'S PROPERTY PRIOR TO REPAIR.
- C. PROTECT ALL ITEMS WITHIN CONTRACT LIMITS NOT INDICATED TO BE REMOVED. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
- D. CONTACT THE LANDSCAPE ARCHITECT PRIOR TO REMOVING ANY PLANT MATERIAL NOT INDICATED TO BE PROTECTED OR REMOVED.
- E. CONTRACTOR TO PROVIDE ADEQUATE BARRICADES AND TRAFFIC CONTROL. COMPLY WITH REQUIREMENTS OF LOCAL JURISDICTION.
- F. CONTRACTOR SHALL SAW CUT ALL ASPHALT OR CONCRETE TO BE REMOVED TO THE NEAREST CONTROL JOINT WHERE PRACTICAL.
- G. PROTECT ALL ITEMS WITHIN CONTRACT LIMITS NOT INDICATED TO BE REMOVED. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

KEYNOTES

- A. REMOVE EXISTING ASPHALT
- B. REMOVE EXISTING CONCRETE SIDEWALK AND CURB
- C. REMOVE EXISTING VEGETATION
- D. REMOVE EXISTING FENCE
- E. REMOVE AND PRESERVE BENCHES (7)
- F. REMOVE AND PRESERVE TABLE SHADE STRUCTURE
- G. REMOVE TRASH BINS
- H. PRESERVE AND RELOCATE EXISTING TREES
- I. REMOVE BACKSTOP
- J. EXISTING MONUMENT SIGNAGE TO REMAIN
- K. REMOVE EXISTING PARKING BLOCK
- L. EXISTING BENCH TO REMAIN (3)



LANDSCAPE ARCHITECT
CONFLUENCE
 417 Delaware Street
 Kansas City, MO 64105
 816.531.7227
 www.thinkconfluence.com



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
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DEMOLITION PLAN

SP101

01 SP101 DEMOLITION PLAN



THE LINE SHOWN ABOVE IS
WITHIN THE ORIGINAL PLAT
SHEETS ORIGINAL PLAT SIZE

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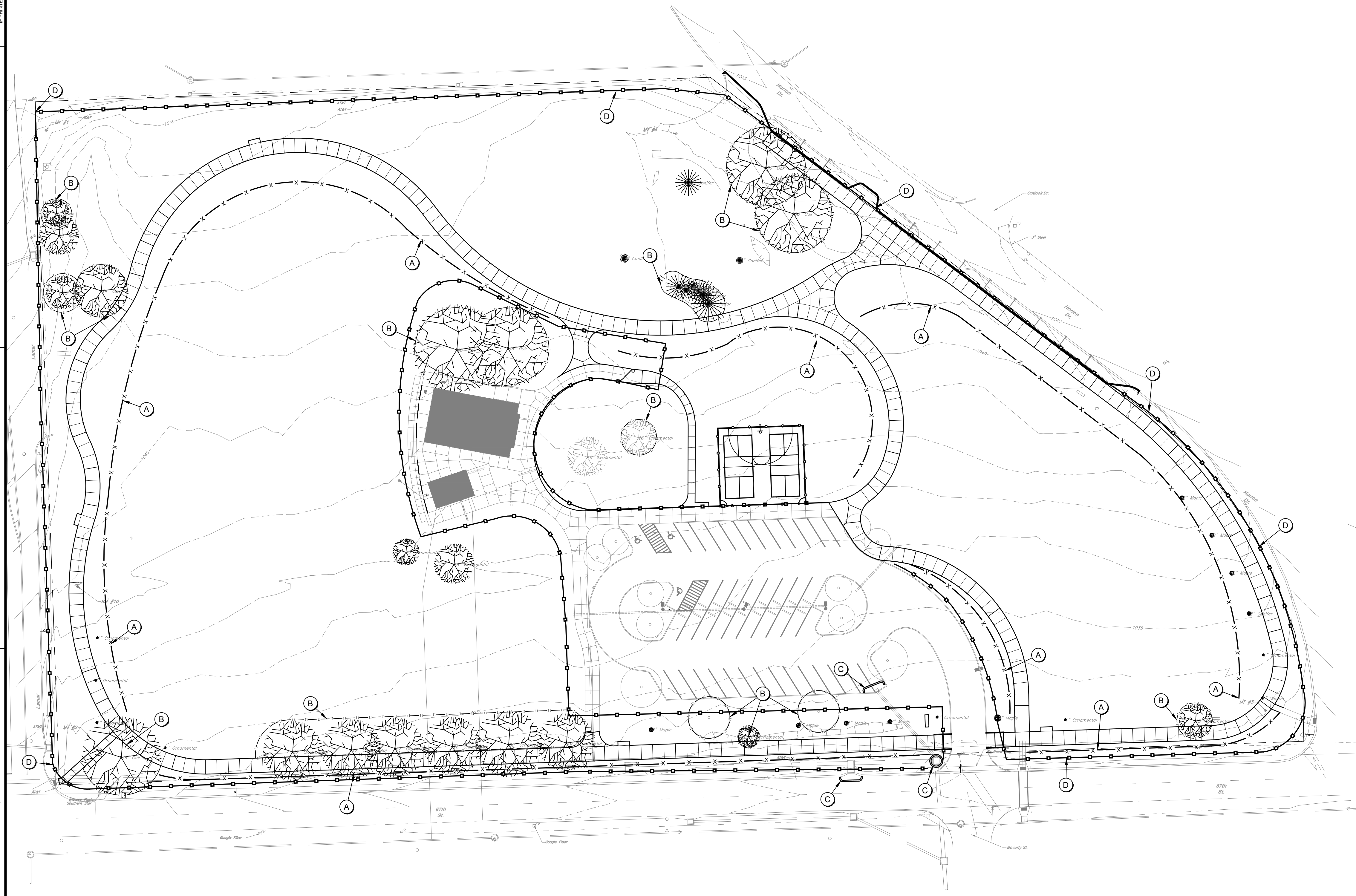
THE SQUARES ABOVE ARE COLOR
WITHIN THE ORIGINAL PLAT
SHEETS ORIGINAL PLAT SIZE

C

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EROSION CONTROL GENERAL NOTES

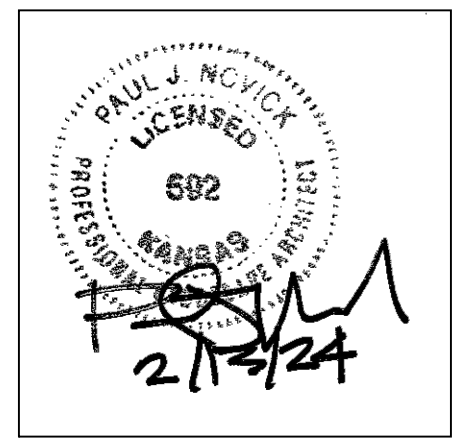
- A. POTENTIAL SOURCES OF POLLUTION: SITE SOURCES OF POLLUTION GENERATED AS A RESULT OF THIS PROJECT RELATED TO SILTS AND SEDIMENT AND OTHER MATERIALS WHICH MAY BE TRANSPORTED AS A RESULT OF A STORM EVENT FROM THE CONSTRUCTION SITE.
- B. RESPONSIBILITY: THIS POLLUTION PREVENTION PLAN ILLUSTRATES GENERAL MEASURES TO BE TAKEN FOR COMPLIANCE WITH THE PERMIT. ALL MITIGATION MEASURES REQUIRED, AS A RESULT OF ACTIVITIES, ARE THE RESPONSIBILITY OF THE CONTRACTOR SHALL TAKE ALL ACTIONS NECESSARY FOR INSTALLATION OF CONTROL MEASURES FOR COMPLIANCE WITH PERMIT REQUIREMENTS.
- C. CONTROLS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL THE REQUIREMENTS OF THE GENERAL PERMIT INCLUDING BUT NOT LIMITED TO, THE FOLLOWING:
- D. THE CONTRACTOR SHALL PROTECT ADJOINING PROPERTY INCLUDING PUBLIC UTILITIES, SANITARY AND STORM DRAINAGE SYSTEMS AND STREETS FROM ANY DAMAGE RESULTING FROM MOVEMENT OF EARTH OR OTHER DEBRIS FROM PROJECT SITE. REPAIR ANY DAMAGE IMMEDIATELY AT NO ADDITIONAL COST.
- E. THE CONTRACTOR SHALL PREVENT ACCUMULATION OF EARTH, SILTATION OR DEBRIS ON ADJOINING PUBLIC OR PRIVATE PROPERTY FROM PROJECT SITE. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR PREVENTION.
- F. PRIOR TO SITE CLEARING AND GRADING OPERATIONS, CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROJECT ON THE DOWNSLOPE SIDES OF THE SITE AND EXCAVATE THE TEMPORARY SILTATION BASINS IN THE EXISTING DRAINAGE WAY AS SHOWN ON THE PLANS.
- G. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.
- H. A COMBINATION OF SILT FENCES, MULTIPLE SEDIMENT TRAPS OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL SIDE SLOPES AND DOWNSLOPE BOUNDARIES OF THE DISTURBED AREA.
- I. AS AREAS REACH THEIR FINAL GRADE AND UPON THE COMPLETION OF THE STORM SEWERS, PROVIDE ADDITIONAL SILTATION FENCE, TEMPORARY SILT BASINS, DIVERSION DIKES AND EARTH DIKES, SILT FENCE AND STRAW BALES WRAPPED WITH FILTER FABRIC, DITCH CHECKS AND SILT FENCE ENCLOSURES AROUND ALL STORM SEWER OUTFALLS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILTATION FENCE AND EARTH DIKES AS MAY BE REQUIRED ON ALL EMBANKMENTS, EARTH STOCKPILES AND OTHER AREAS TO PROVIDE CONTROL.
- J. THE CONTRACTOR SHALL PROVIDE TEMPORARY AND/OR PERMANENT SEEDING OF AREAS UPON COMPLETION OF GRADING AS SOON AS PRACTICAL. "FINAL STABILIZATION" MEANS ALL SOIL DISTURBING ACTIVITIES ARE COMPLETE AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A MINIMUM DENSITY OF 70% FOR THE AREA HAS BEEN ESTABLISHED OR AN EQUIVALENT STABILIZATION MEASURE.
- K. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA FOR AT LEAST 21 DAYS, THE AREA SHALL BE STABILIZED BY TEMPORARY EROSION CONTROLS WITHIN 14 DAYS OF CEASING CONSTRUCTION ACTIVITIES.
- L. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT AND SEDIMENT REMOVAL THROUGHOUT THE PERMIT PERIOD. CLEANING OF SILT CONTROL DEVICES SHALL BEGIN WHEN THE FEATURES HAVE LOST A MAXIMUM OF 50% OF THEIR CAPACITY.
- M. THE PROJECT AREA AND CONTROL DEVICES WILL BE INSPECTED BY PERSONNEL ASSIGNED BY THE CONTRACTOR EVERY SEVEN CALENDAR DAYS AND WITHIN 48 HOURS AFTER EACH RAIN EVENT OF 1/2" OR GREATER OR HEAVY SNOW MELT. THE FINDINGS AND ACTIONS TAKEN OF THIS INSPECTION SHALL BE RECORDED IN THE PROJECT DIARY WITH A COPY SUBMITTED WEEKLY TO THE OWNER DURING THE PROJECT. THIS PLAN MAY BE REVISED BASED UPON FINDINGS OF THE INSPECTION. THE CONTRACTOR SHALL IMPLEMENT ALL REVISIONS.
- N. CONTRACTOR TO PROVIDE NECESSARY DUST CONTROL MEASURES FOR THE SITE IN ACCORDANCE WITH CITY STANDARDS.
- H. TEMPORARY CONSTRUCTION FENCING TO BE REMOVED AS SECTIONS OF SITE ARE COMPLETED. CONTRACTOR TO PROVIDE PHASED WORK PLAN TO RE-OPEN AREAS.

KEYNOTES

- A. INSTALL SILT FENCE; RE:07-08/SP400
- B. INSTALL CONSTRUCTION FENCE AROUND TREES TO BE PRESERVED; RE:10-11/SP400
- C. INSTALL CONSTRUCTION WADDLE; RE: 04/SP400
- D. INSTALL CHAIN LINK CONSTRUCTION FENCE



LANDSCAPE ARCHITECT
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Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

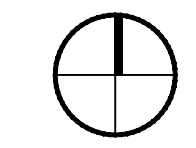
MOHAWK PARK PHASE 2
MISSION KS PARKS AND RECREATION
6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

EROSION CONTROL PLAN

SP102

01 SP102 EROSION CONTROL PLAN



GENERAL NOTES

- A. IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY ANY DISCREPANCIES BETWEEN THE SURVEY AND FIELD CONDITIONS.
- B. THE CONTRACTOR SHALL NOTIFY THE 811 ONE CALL CENTER TO REQUEST THE LOCATION OF ALL UTILITIES WITHIN THE CONSTRUCTION AREA PRIOR TO ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PRIVATE UTILITIES NOT COVERED BY 811 ONE CALL. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
- C. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING CONDITIONS, IMPROVEMENTS, VEGETATION AND UTILITIES TO REMAIN. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.
- D. THE CONTRACTOR SHALL CONSTRUCT ALL ITEMS WITHIN THIS CONTRACT IN ACCORDANCE WITH ALL STATE AND LOCAL CODES, REGULATIONS AND ENGINEERING STANDARDS. CONTRACTOR TO COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY OR STREETS WITH THE APPROPRIATE JURISDICTIONS.
- E. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THESE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
- F. NO SITE LIGHTING WILL BE INCORPORATED AT THIS TIME.

THE LINE SHOWN ABOVE IS EITHER A PROPERTY LINE OR THE ORIGINAL PLAT SIZE

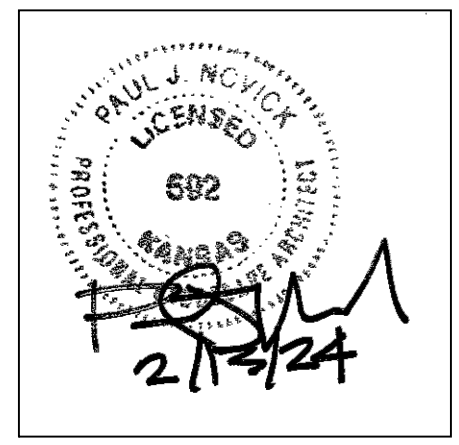
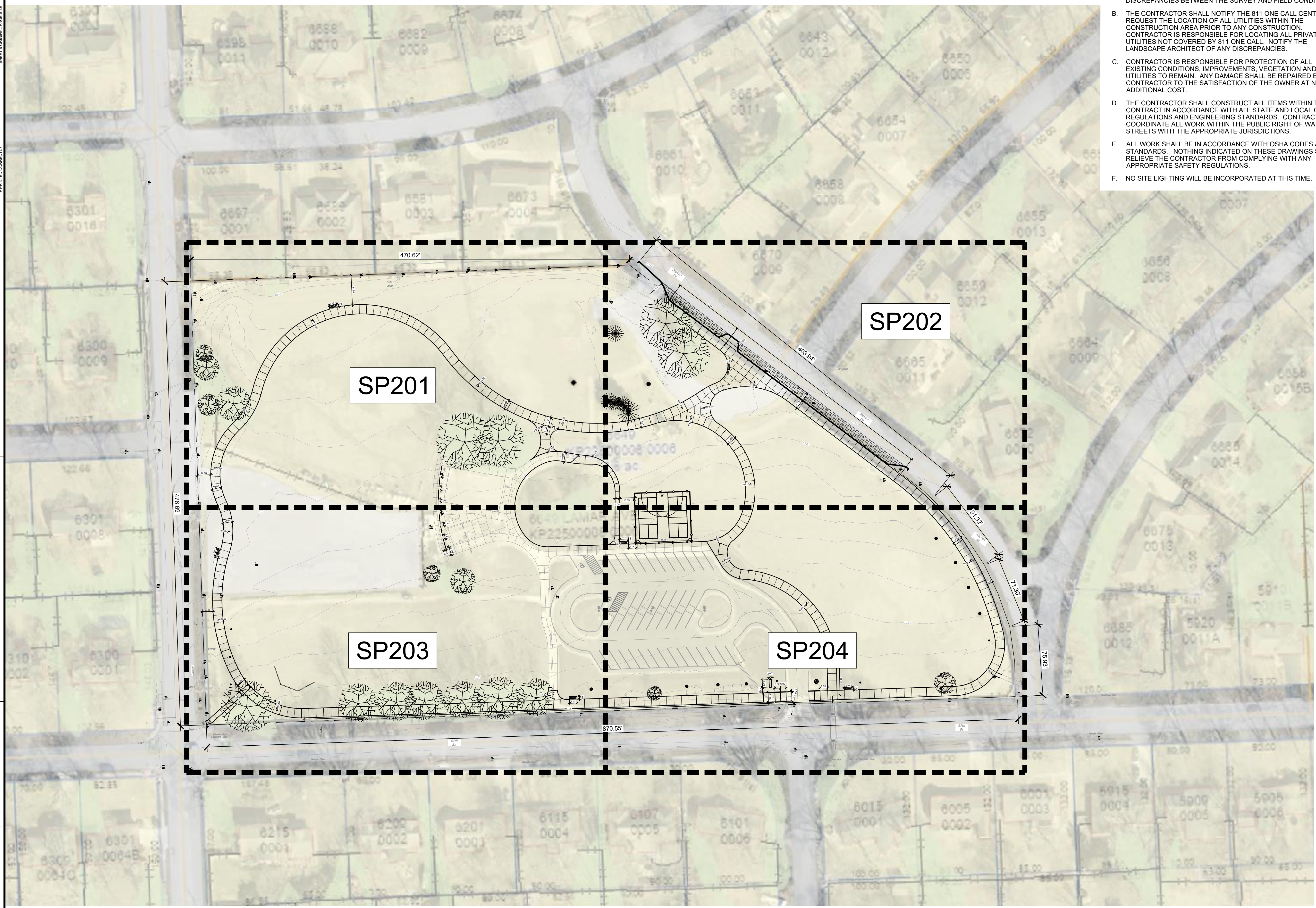
D

THE SQUARES ABOVE ARE COLOR MATCHES TO THE ORIGINAL DRAWING. IF PRINTED CORRECTLY, ALL SQUARES SHOULD BE THE SAME COLOR.

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Revision Schedule

No.	Date	Description
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MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

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LAYOUT PLAN

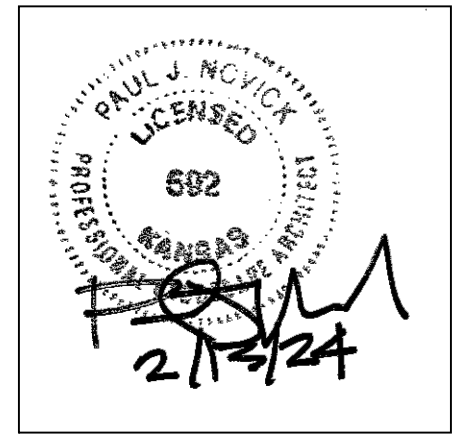
SP200



KEYNOTES

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2. PLAYGROUND
3. BASKETBALL COURT (HALF) / 2 PICKLEBALL COURTS WITH REMOVABLE NETS; RE: 02/SP401
4. PICKLEBALL NET; RE:01/SP401
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6. PLAY COURT FENCE GATE; RE:11/SP400
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8. EXISTING PARKING LOT
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12. TRASH RECEPTACLE (PURCHASED BY OWNER, INSTALLED BY CONTRACTOR)
13. BACKSTOP RE:03/SP401
14. CURB RE:06/SP400
15. ASPHALT PARKING RE:SP403

#	Position X	Position Y
SP201-01	2261919.10	263363.38
SP201-02	2261924.26	263474.63
SP201-03	2261967.09	263513.62
SP201-04	2262161.08	263554.40
SP201-05	2262246.53	263488.19
SP201-06	2262260.09	263439.17
SP201-07	2262301.90	263444.84



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MOHAWK PARK PHASE 2

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LAYOUT PLAN
 ENLARGEMENT

SP201

THE LINE SHOWN ABOVE IS WITH THE ORIGINAL SIZE OF SHEETS ORIGINAL SIZE IS 11" X 17"

THE SQUARES ABOVE ARE COLOR WITH THE ORIGINAL SIZE OF SHEETS ORIGINAL SIZE IS 11" X 17"

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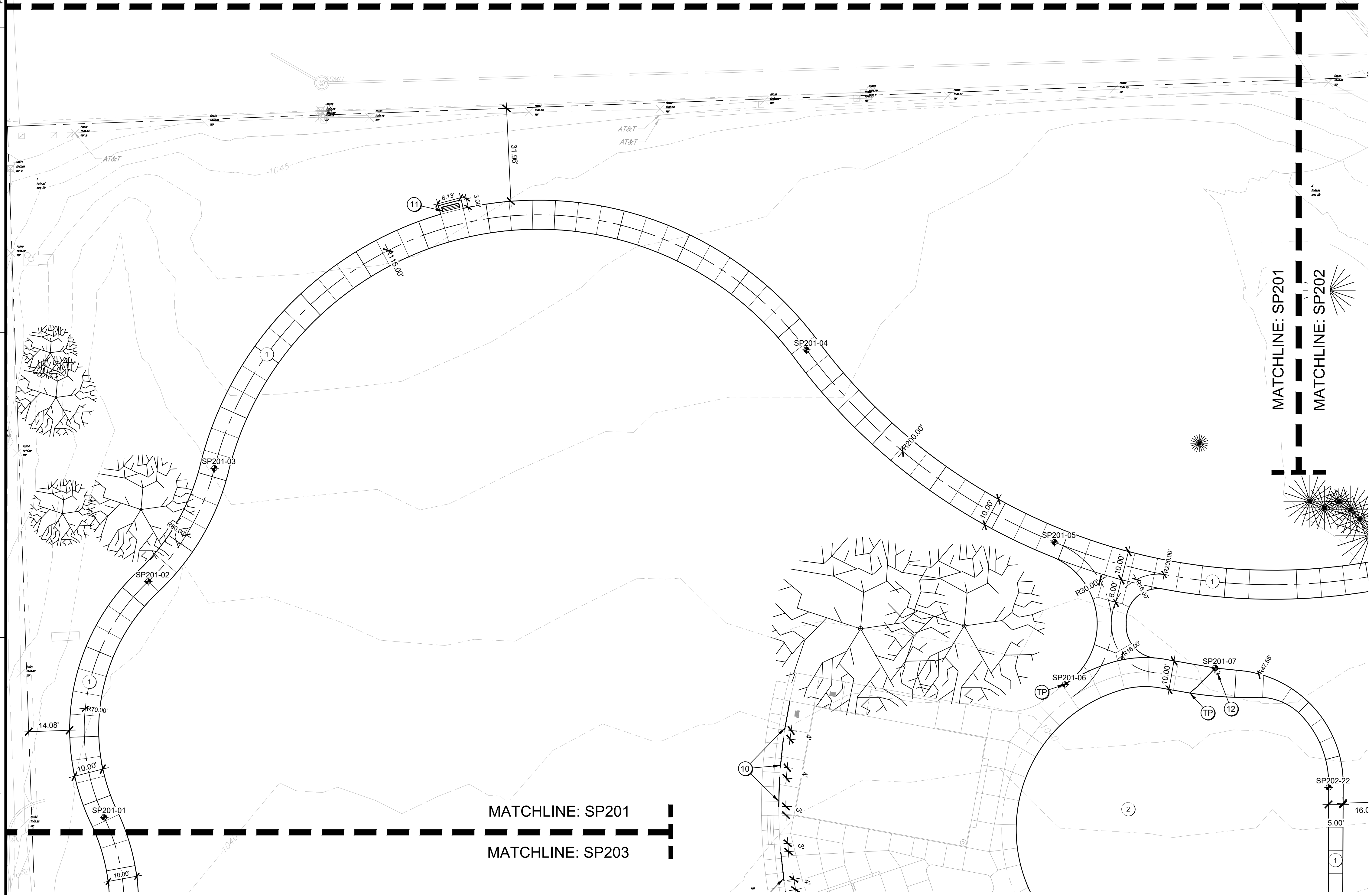
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02 SP201 LAYOUT PLAN ENLARGEMENT

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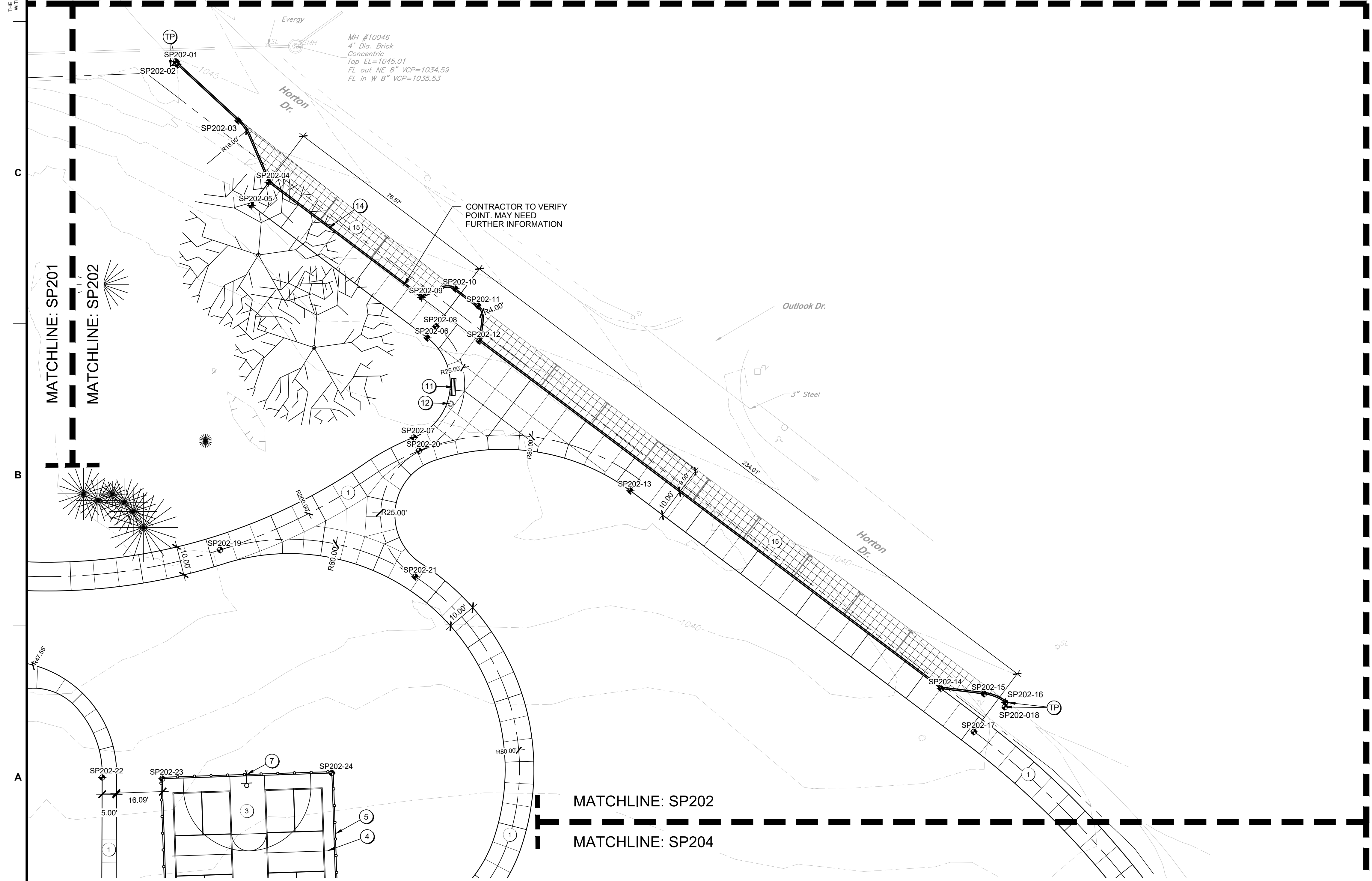
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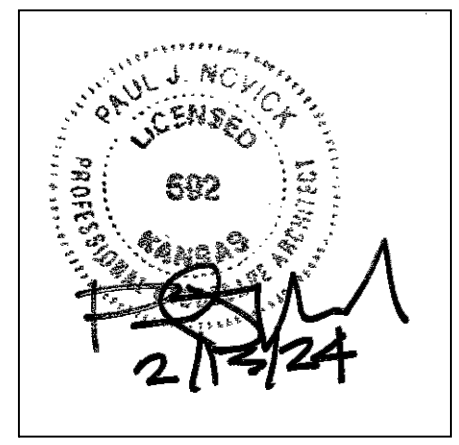
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14. CURB RE:06/SP400
15. ASPHALT PARKING RE:SP403

THE LINE SHOWN ABOVE IS
 WITHIN THE ORIGINAL PLANS
 IF PRINTED CORRECTLY.
 THE SQUARES ABOVE ARE COLOR
 WITHIN THE ORIGINAL PLANS
 IF PRINTED CORRECTLY.



#	Position X	Position Y
SP203-01	2261922.57	263341.55
SP203-02	2261933.63	263210.41
SP203-03	2261939.86	263192.31
SP203-04	2261904.02	263159.88
SP203-05	2261908.23	263156.95
SP203-06	2261943.21	263188.61
SP203-07	2262007.26	263167.51
SP203-08	2262259.40	263181.11
SP203-09	2262269.06	263191.08
SP203-10	2262279.06	263192.10
SP203-11	2262291.99	263184.23



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

03 SP202 LAYOUT PLAN ENLARGEMENT



MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number 23093
 Issue 00000
 Date YYYY-MM-DD

LAYOUT PLAN
 ENLARGEMENT

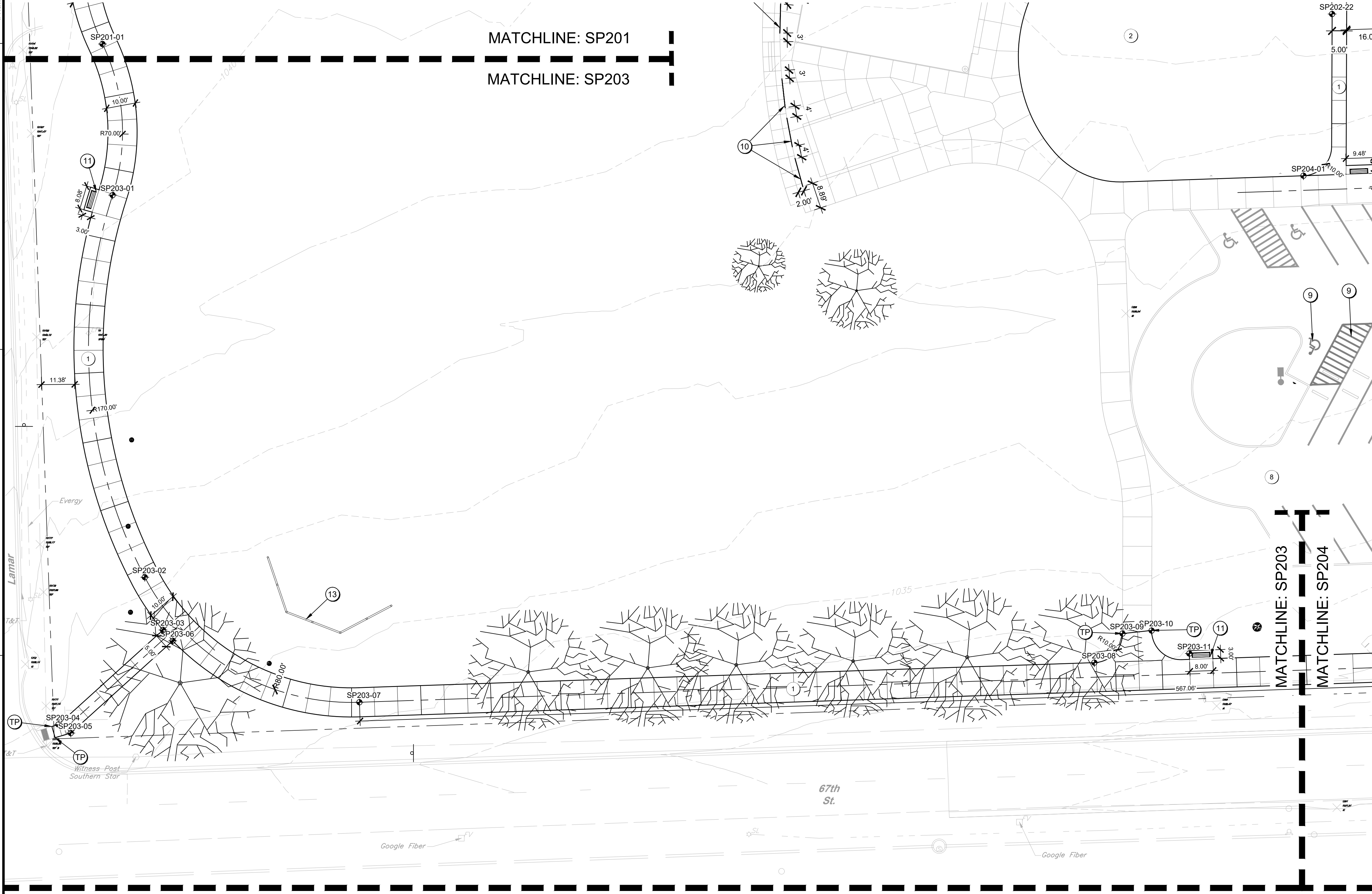
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KEYNOTES

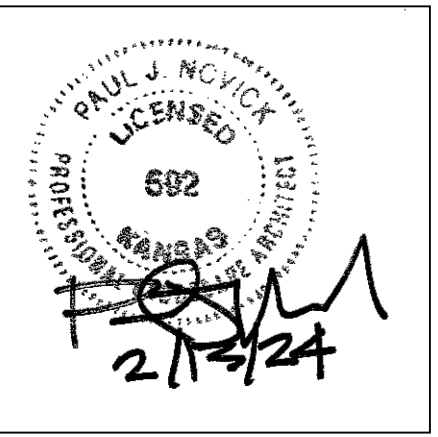
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THE LINE SHOWN ABOVE IS WITH THE ORIGINAL SCALE SIZE. THE SQUARES ABOVE ARE COLOR WITH THE ORIGINAL SCALE SIZE. IF PROVIDED CORRECTLY.

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#	Position X	Position Y
SP203-01	2261822.57	263341.55
SP203-02	2261893.63	263210.41
SP203-03	2261939.86	263182.31
SP203-04	2261904.02	263159.88
SP203-05	2261908.23	263155.95
SP203-06	2261943.21	263188.61
SP203-07	2262007.26	263187.51
SP203-08	2262259.40	263181.11
SP203-09	2262289.06	263191.08
SP203-10	2262278.06	263192.10
SP203-11	2262291.99	263184.23



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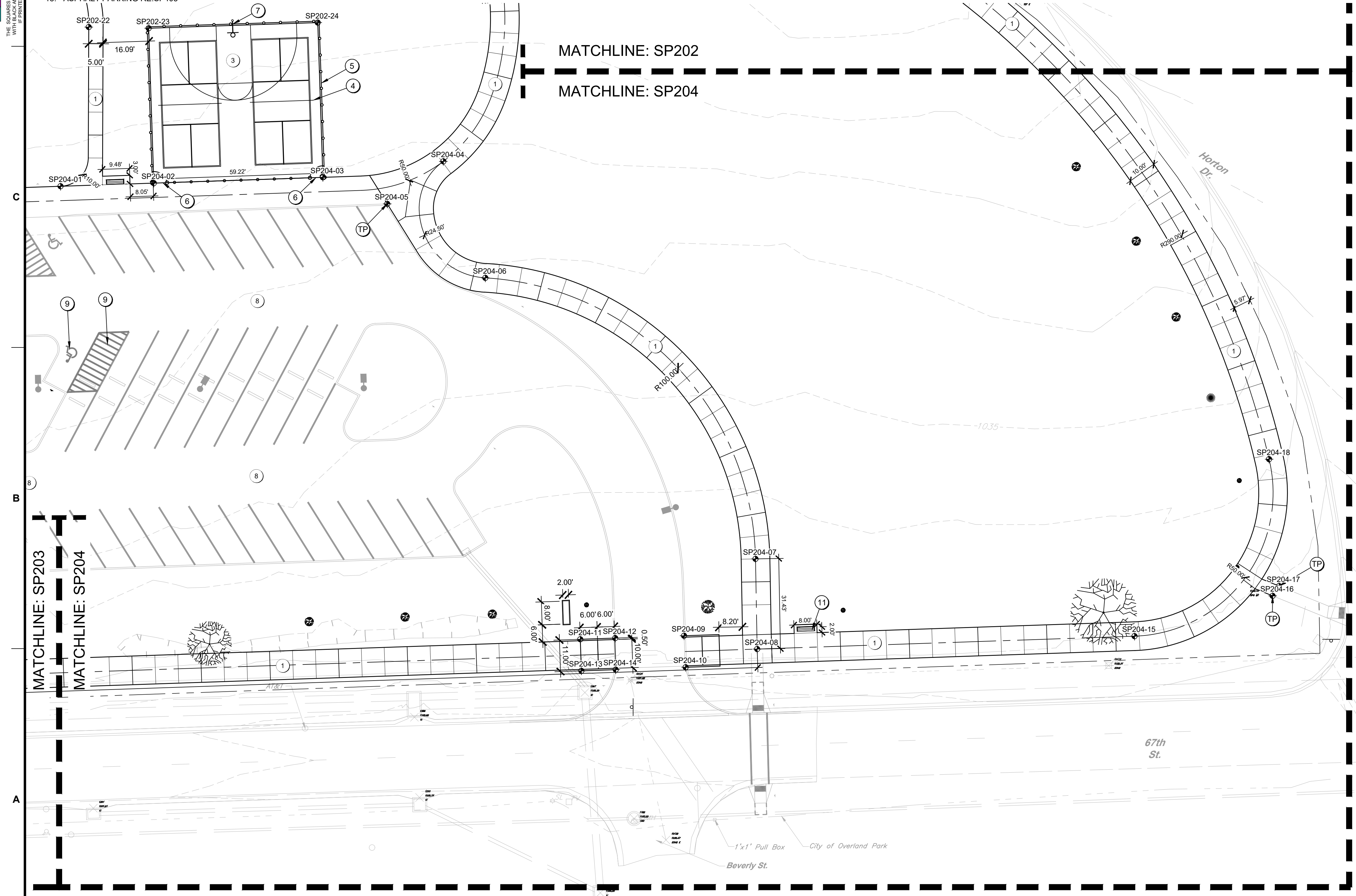
LAYOUT PLAN
 ENLARGEMENT

SP203

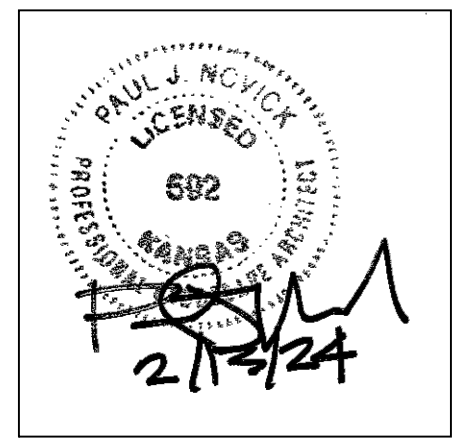


- # KEYNOTES
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THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL OR A
 COPY OF THE ORIGINAL
 SHEET'S ORIGINAL SCALE SIZE
 THE SQUARES ABOVE ARE COLOR
 WITH A PRINTING DEFECT
 IF PRINTED CORRECTLY



#	Position X	Position Y
SP204-01	226231.15	263348.19
SP204-02	2262363.66	263349.29
SP204-03	2262422.60	263351.30
SP204-04	2262464.60	263356.87
SP204-05	2262445.04	263343.05
SP204-06	2262479.23	263316.25
SP204-07	2262573.41	263218.26
SP204-08	2262573.99	263186.84
SP204-09	2262548.51	263191.47
SP204-10	2262549.07	263180.48
SP204-11	2262512.33	263180.24
SP204-12	2262524.02	263180.65
SP204-13	2262512.71	263179.24
SP204-14	2262524.70	263179.65
SP204-15	2262705.55	263181.32
SP204-16	2262733.68	263205.39
SP204-17	2262755.93	263208.80
SP204-18	2262792.45	263203.04



Revision Schedule

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MOHAWK PARK PHASE 2
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Project Number 23093
 Issue 00000
 Date YYYY-MM-DD

LAYOUT PLAN
 ENLARGEMENT

SP204

05 SP204 LAYOUT PLAN ENLARGEMENT



THE LINE SHOWN ABOVE IS
EITHER A CENTERLINE OR
SHEET'S ORIGINAL SCALE SIZE

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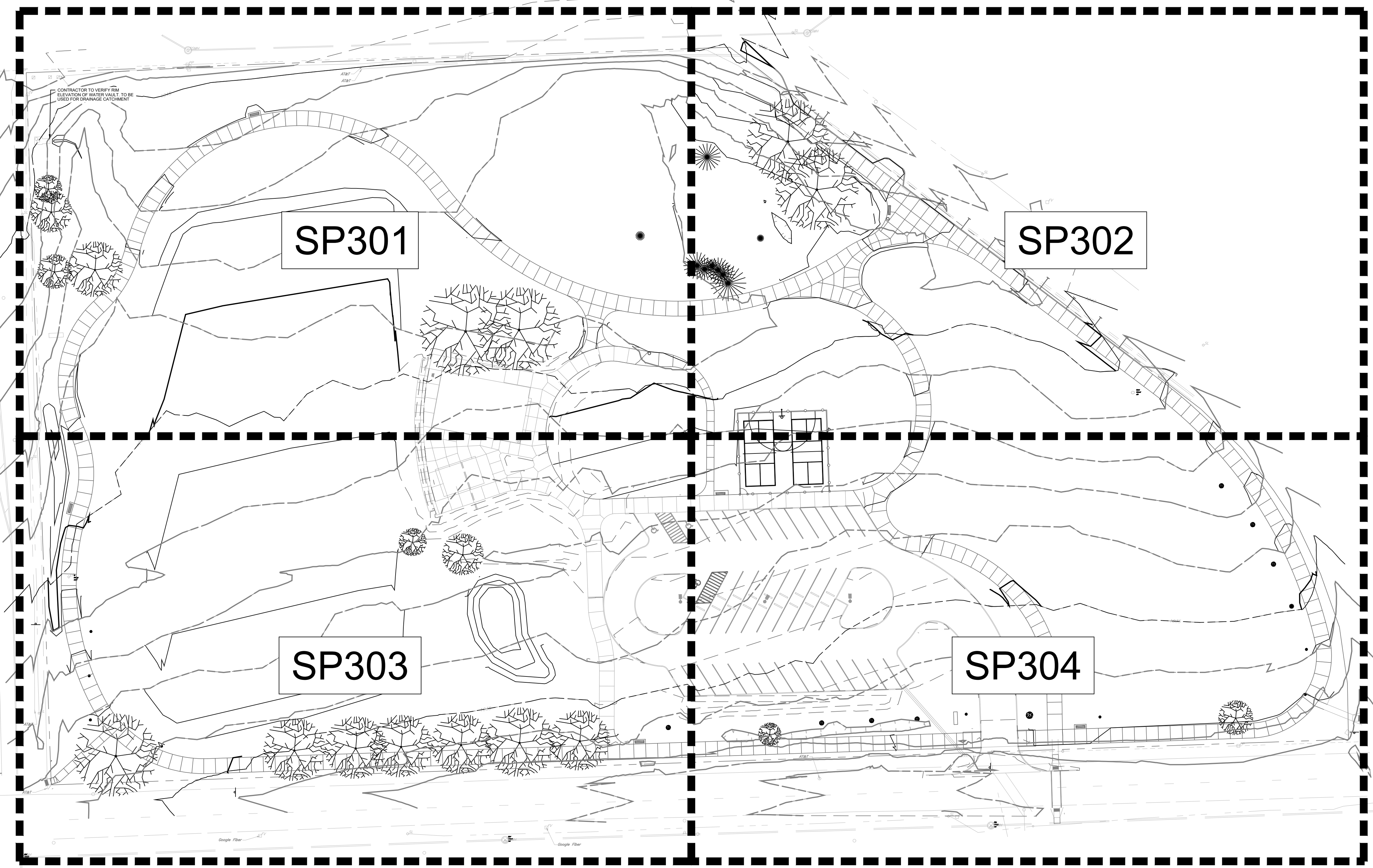
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THE SQUARES ABOVE ARE COLOR
WITH PRINTING AND COPIES. THEY
IF PRINTED CORRECTLY.

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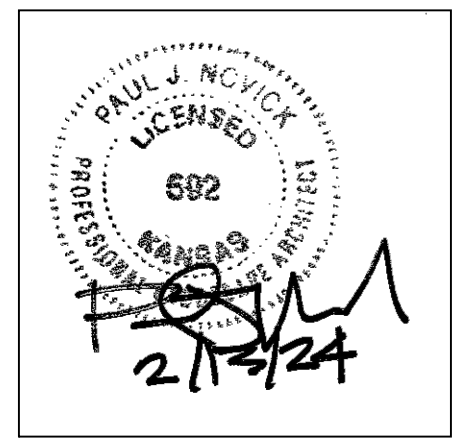


GRADING NOTES

- A. ALL SPOT ELEVATIONS ARE AT THE TOP OF FINISHED SURFACES UNLESS NOTED OTHERWISE. SPOT ELEVATIONS SHOWN IN PARKING ARE AT THE BOTTOM OF CURB. ADD 6" TO COMPUTE TOP OF CURB ELEVATION.
- B. CONTRACTOR TO VERIFY ALL SPOT ELEVATIONS FOR POSITIVE DRAINAGE BEFORE INSTALLATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE SURFACE DRAINAGE IN ALL AREAS, UNLESS OTHERWISE NOTED. ALL NEWLY GRADED GROUND SURFACES SHALL BE FINISHED TO UNIFORM GRADES AND SLOPED IN SUCH A MANNER TO BE FREE OF DEPRESSIONS THAT CAUSE AREAS OF STANDING WATER. THE CONTRACTOR SHALL REPORT ANY CONFLICTS WITH THIS REQUIREMENT TO THE LANDSCAPE ARCHITECT FOR RESOLUTION PRIOR TO FINAL GRADING OPERATIONS.
- C. WALK CROSS SLOPE MAY NOT EXCEED 2.0%. RUNNING SLOPE MAY NOT EXCEED 5.0%. RUNNING SLOPE FOR RAMPS MAY NOT EXCEED 1:12 WITH LANDINGS THAT DO NOT EXCEED 2.0% IN ANY DIRECTION.
- D. WHERE PROPOSED GRADES MEET EXISTING, BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN THE NEW WORK AND EXISTING WORK. PONDING AT JOINTS WILL NOT BE ACCEPTED.
- E. CONTACT LANDSCAPE ARCHITECT PRIOR TO BACKFILLING AGAINST EXISTING BUILDINGS. PROVIDE WATERPROOFING WHEN BACKFILLING AGAINST EXISTING BUILDINGS.
- F. FINAL BERM SHAPE TO BE APPROVED BY LANDSCAPE ARCHITECT.
- G. SEE SPECIFICATIONS FOR MINIMUM DEPTH OF TOPSOIL FOR ALL LAWN AREAS AND PLANTING BEDS.
- H. DEBRIS SHALL BE REMOVED AND PAVEMENT WITHIN THE RIGHT-OF-WAY SWEEPED AT THE END OF EACH WORKING DAY.
- I. CONTRACTOR TO FIELD ADJUST ALL EXISTING SITE UTILITIES TO NEW FINISHED GRADES. EXISTING UTILITIES INCLUDE, BUT ARE NOT LIMITED TO, FIRE HYDRANTS, MANHOLE RIMS, INLETS, WATER VALVES, AND LIGHT BASES.
- J. SILT FENCE AND INLET PROTECTION SHALL BE MAINTAINED UNTIL ESTABLISHMENT OF PERMANENT GROUND COVER.



LANDSCAPE ARCHITECT
CONFLUENCE
 417 Delaware Street
 Kansas City, MO 64105
 816.531.7227
 www.thinkconfluence.com



Revision Schedule

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MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

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Issue	00000
Date	YYYY-MM-DD

GRADING PLAN

SP300

01
 SP300 GRADING PLAN



THE LINE SHOWN ABOVE IS
 ENLARGED FROM THE ORIGINAL
 SHEET'S ORIGINAL SCALE SIZE

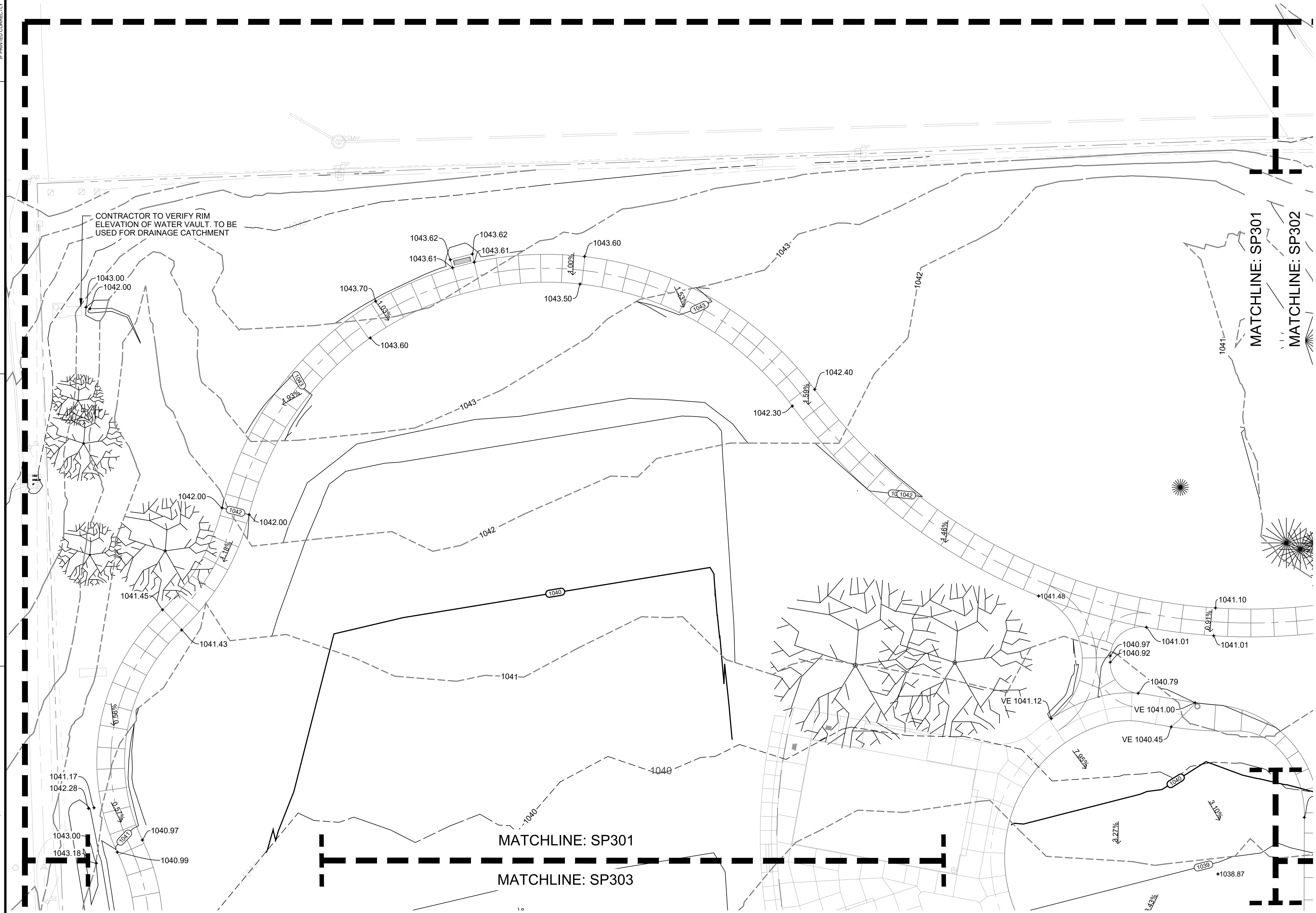
D

C
 THE SQUARES ABOVE ARE COLOR
 WITH THE ORIGINAL SHEET.
 IF PROVIDED CORRECTLY.

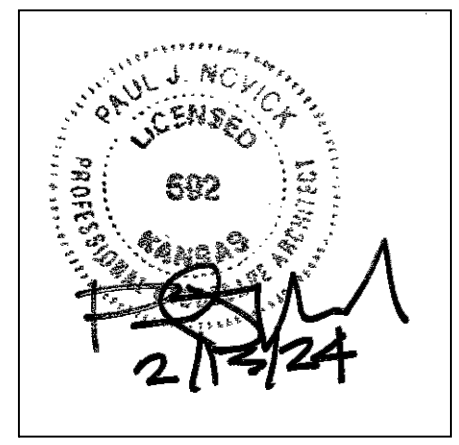
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02 SP301 GRADING PLAN ENLARGEMENT



Revision Schedule

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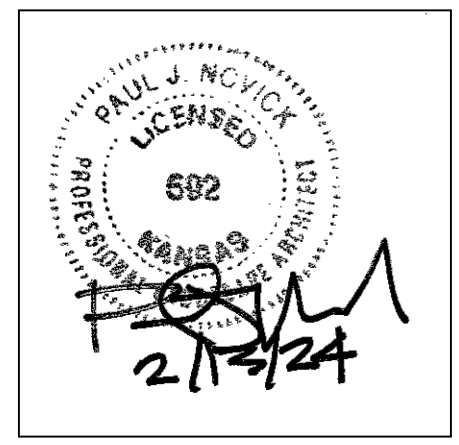
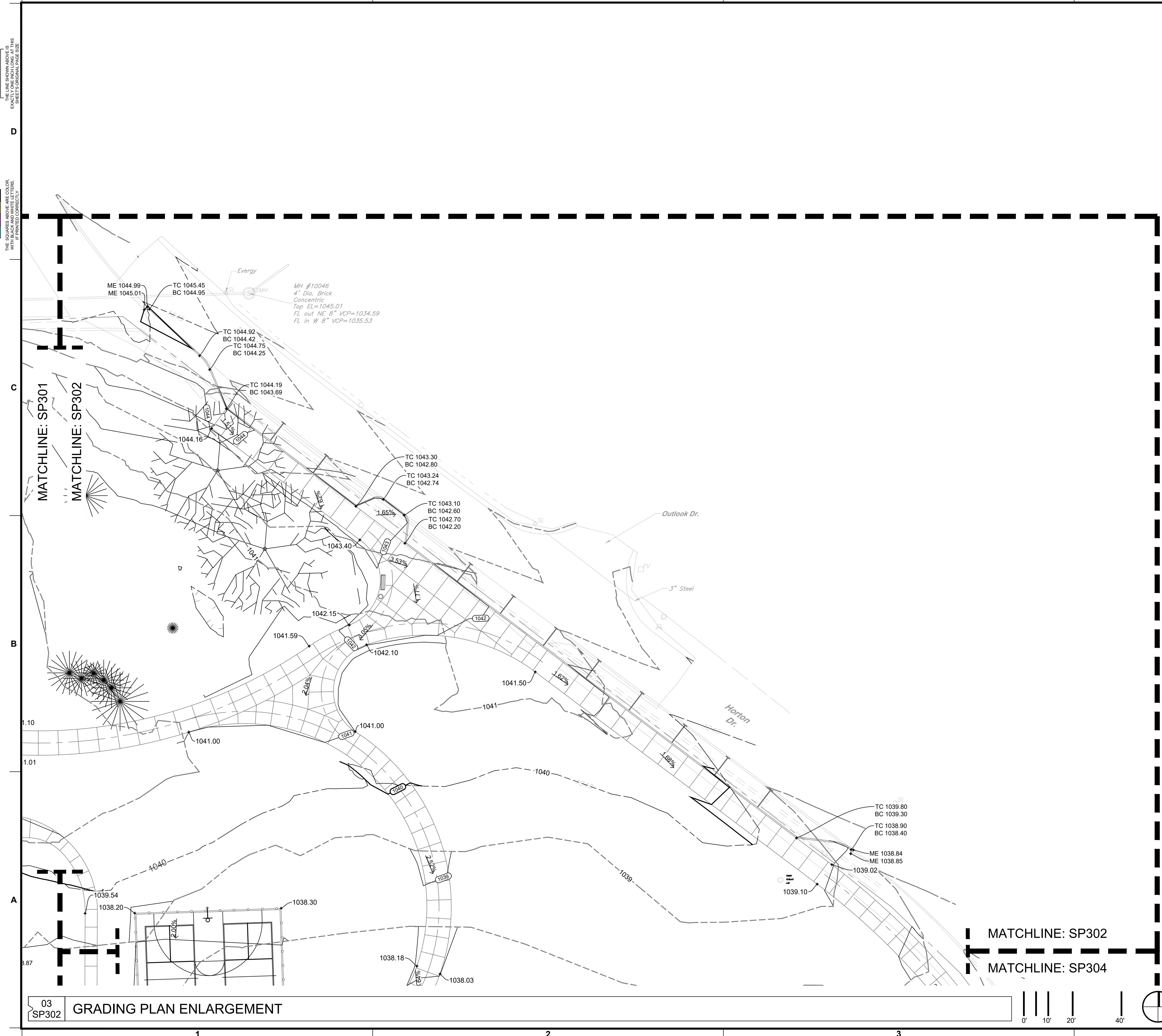
Project Number	23093
Issue	00000
Date	YYYY-MM-DD

GRADING PLAN
 ENLARGEMENT

SP301

THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL SIZE OR
 SHEET'S ORIGINAL SIZE

THE SQUARES ABOVE ARE COLOR
 WITH AN ORIGINAL SIZE OF
 IF PRINTED CORRECTLY



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GRADING PLAN
 ENLARGEMENT

SP302

03 SP302 GRADING PLAN ENLARGEMENT

MATCHLINE: SP302
 MATCHLINE: SP304



THE LINE SHOWN ABOVE IS
ENLARGED FOR CLARITY.
IF PROVIDED CORRECTLY,
IT SHALL BE USED AS SHOWN.

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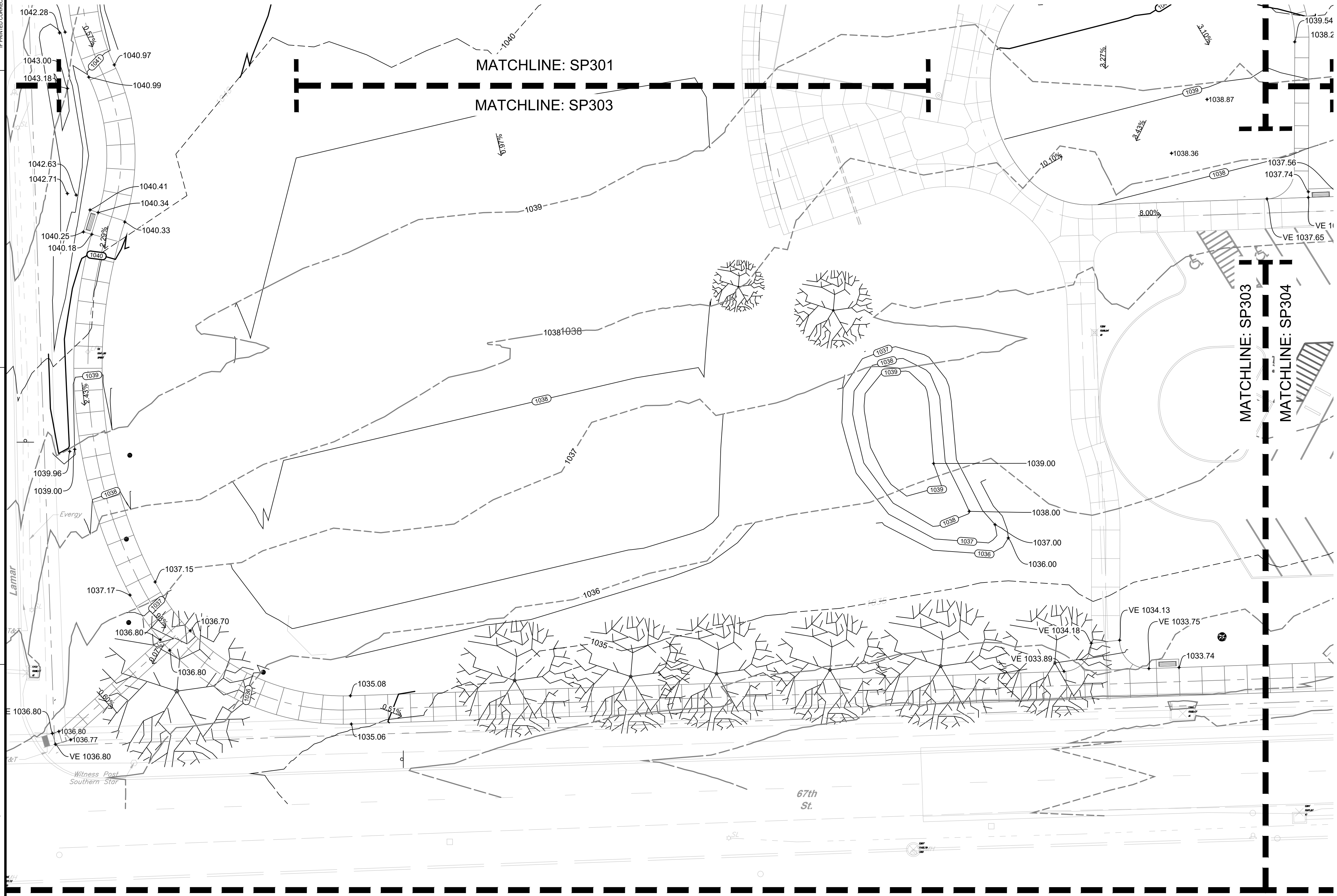
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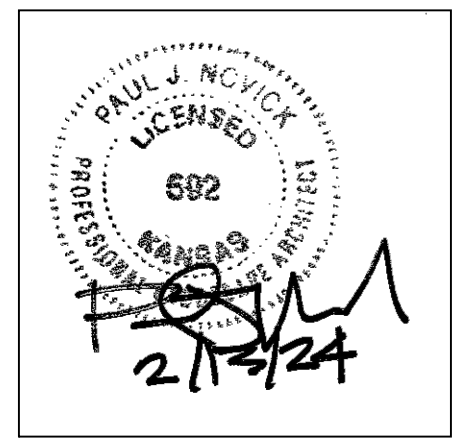
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04 SP303 GRADING PLAN ENLARGEMENT



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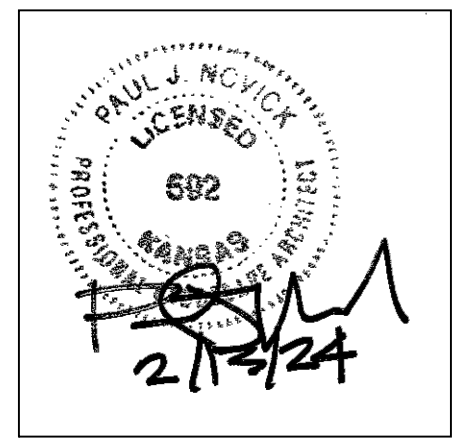
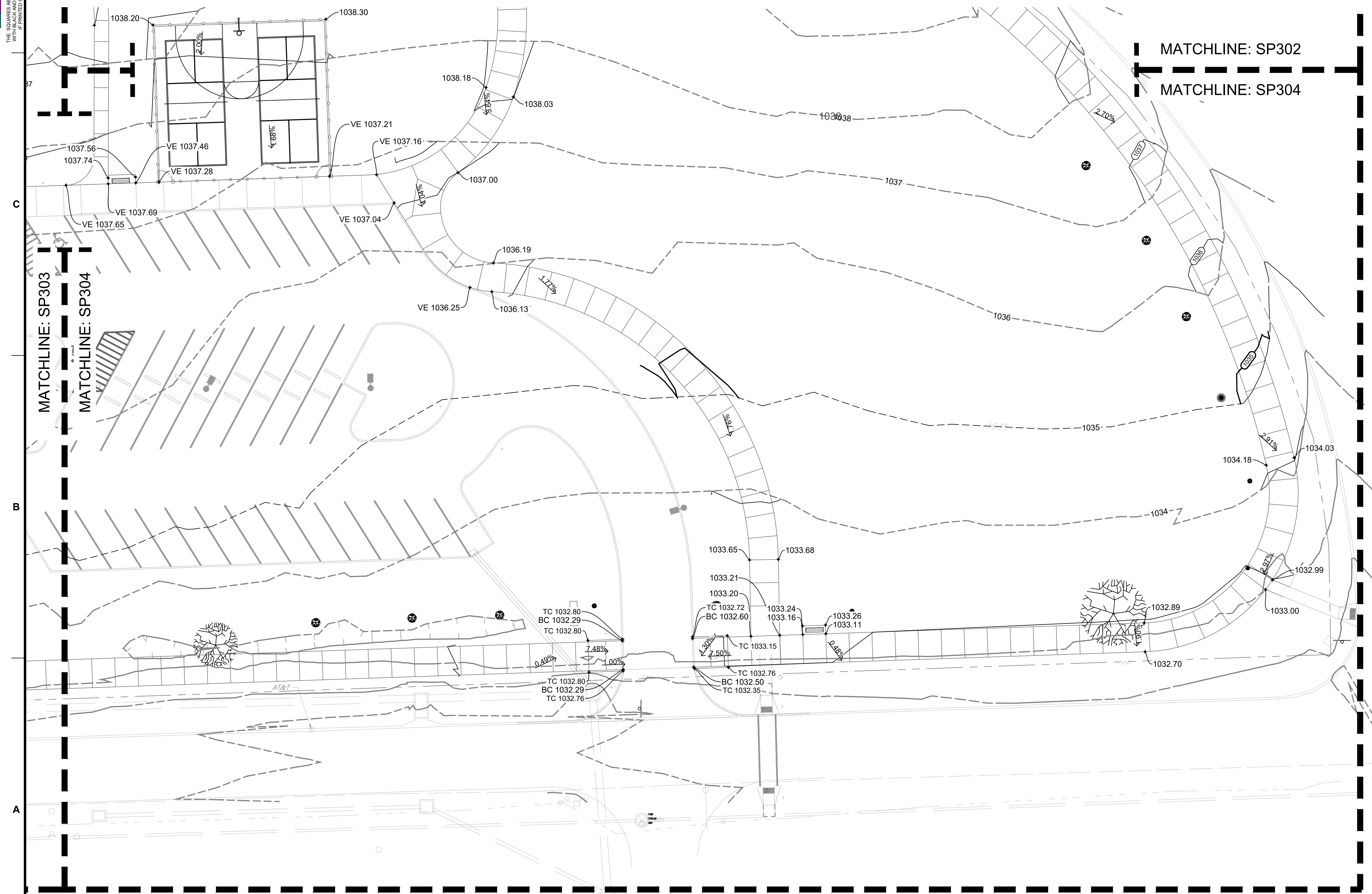
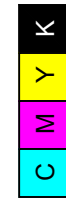
Project Number 23093
Issue 00000
Date YYYY-MM-DD

GRADING PLAN
ENLARGEMENT

SP303

THE LINE SHOWN ABOVE IS
 EITHER AN ENLARGEMENT OR
 SHEET'S ORIGINAL SCALE SIZE

THE SQUARES ABOVE ARE COLOR
 WITH AN UNPRINTED PATTERN.
 IF PRINTED CORRECTLY,



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

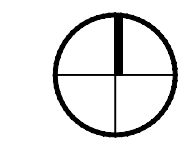
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 Issue 00000
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GRADING PLAN
 ENLARGEMENT

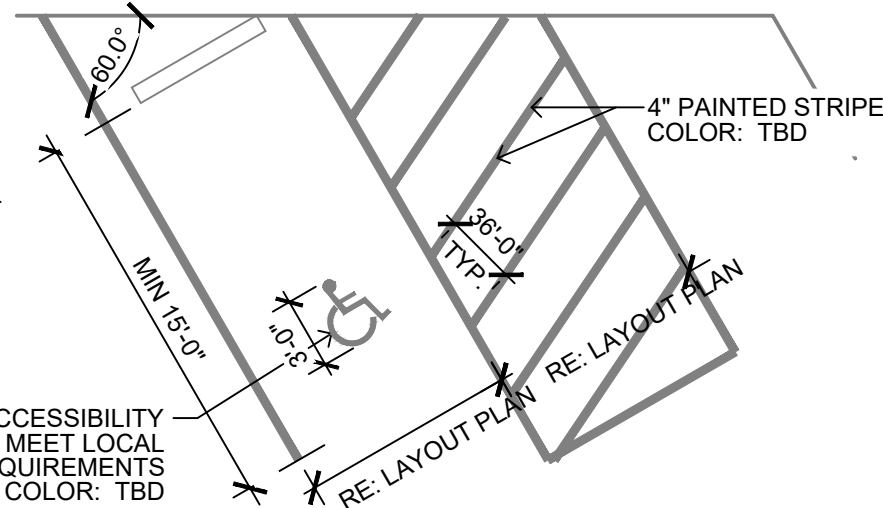
SP304

05 SP304 GRADING PLAN ENLARGEMENT

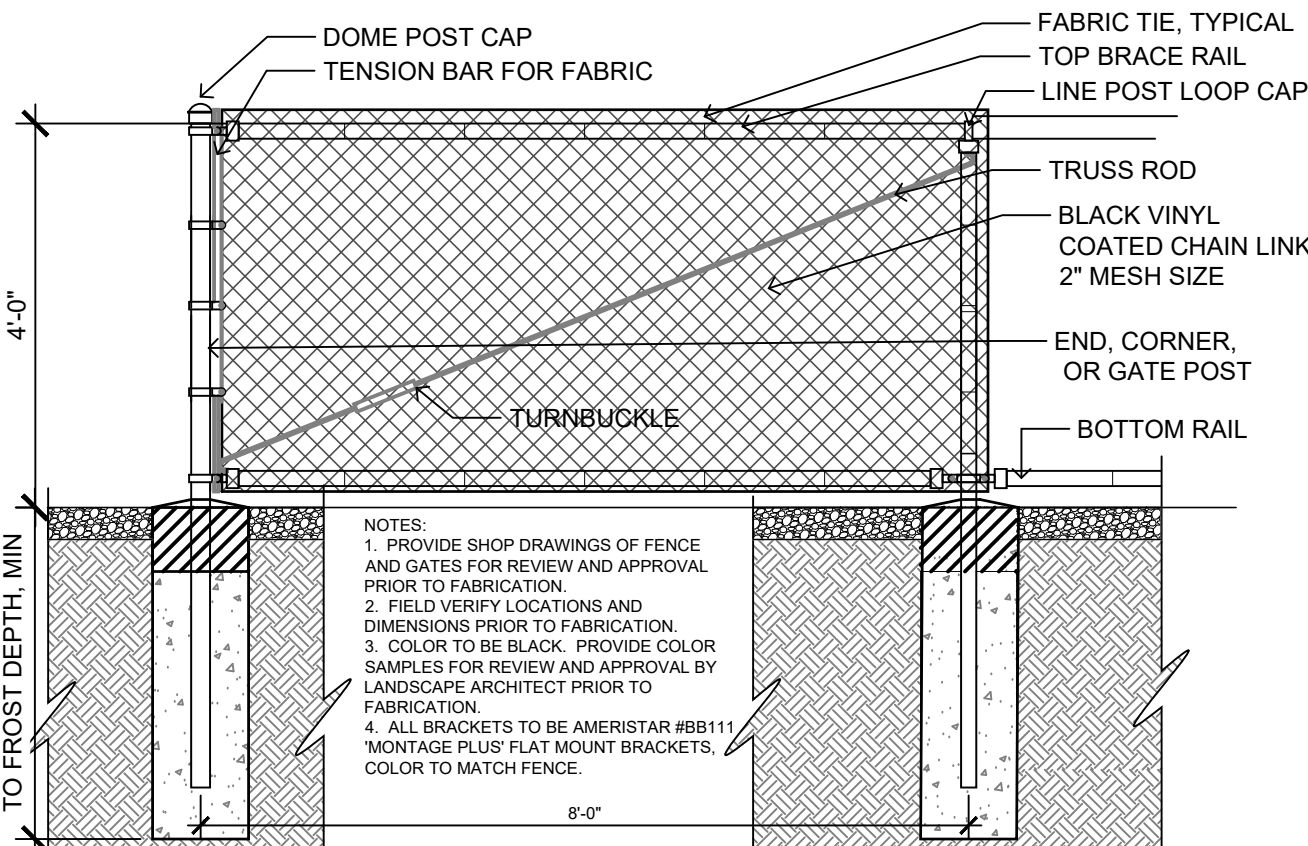


THE LINE SHOWN ABOVE IS WITH ORIGINAL SCALE SIZE. SHEETS ORIGINAL SCALE SIZE.
 THE SQUARES ABOVE ARE COLOR WITH ORIGINAL SCALE SIZE. IF PROVIDED CORRECTLY.

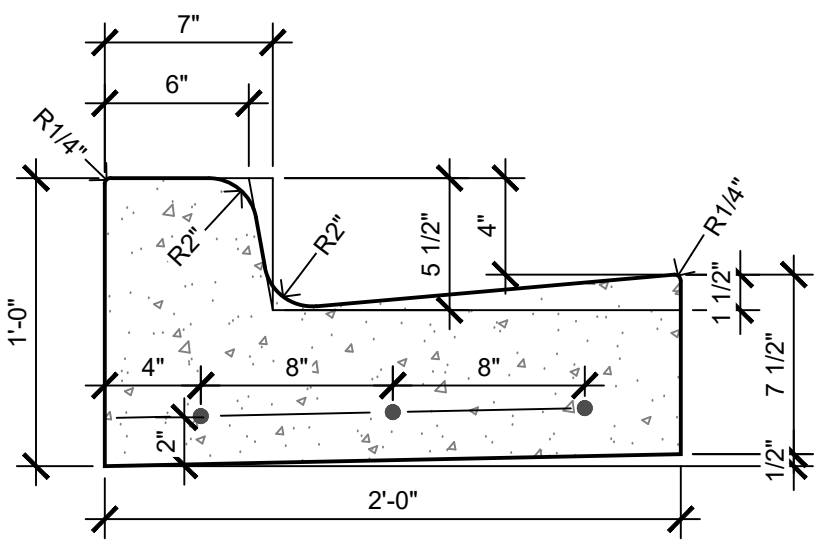
- PAVEMENT PAINT SPECS**
- MPT #32 ALKYD TRAFFIC PAINT
 - VERIFY LAYOUT AND COLOR WITH ARCHITECT
 - SWEEP AND CLEAN PAVEMENT PRIOR TO PAINTING
 - APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS WITH UNIFORM, STRAIGHT EDGES
 - APPLY 2 COATS



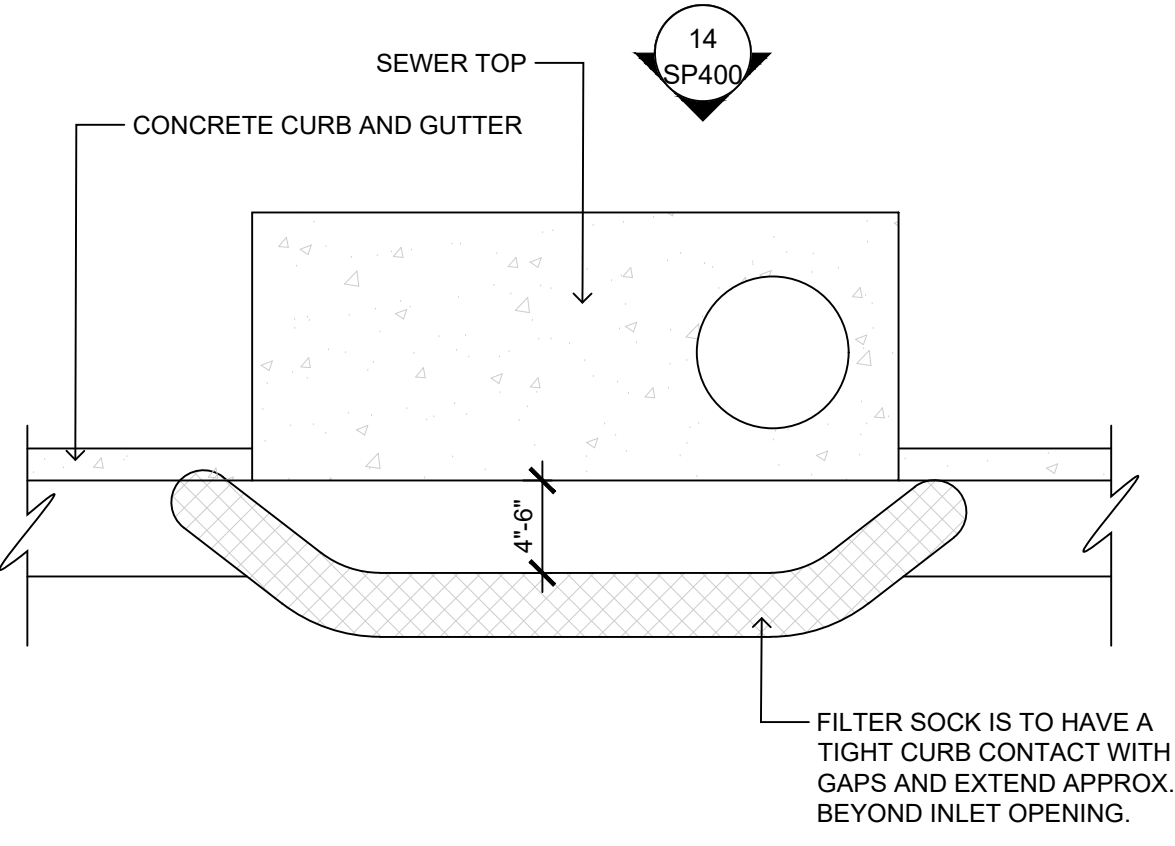
15 SP400 PLAN: ADA PARKING STRIPING SCALE: 1/4" = 1'-0"



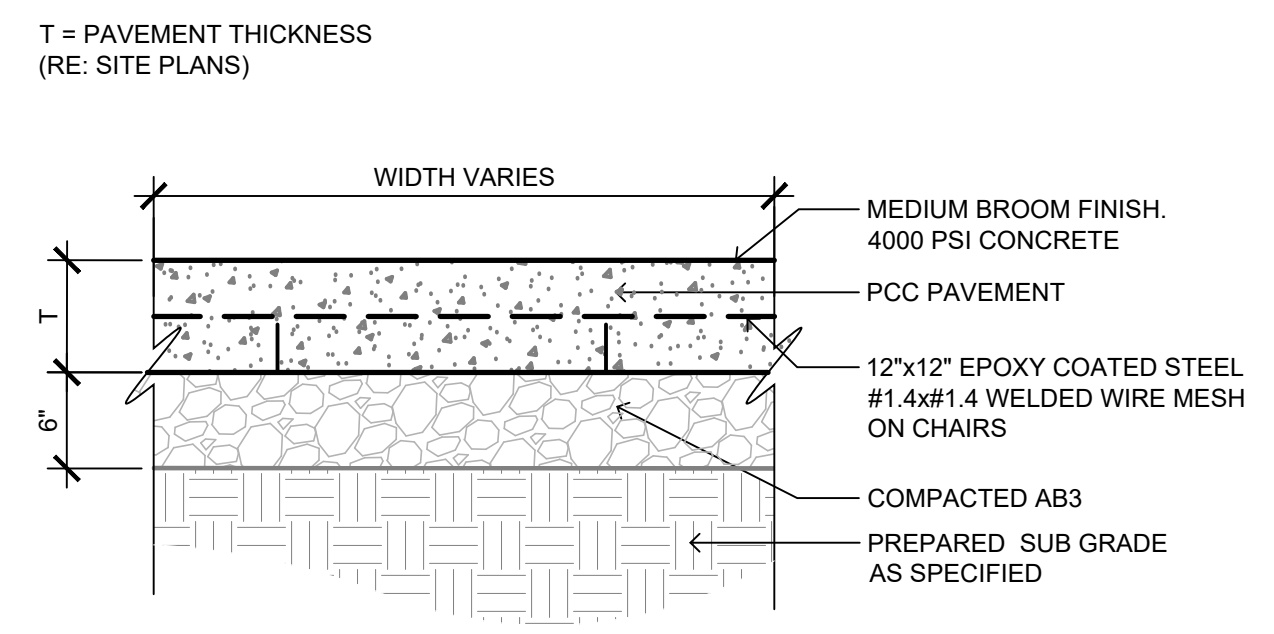
12 SP400 SECTION: 4'-0" BLACK VINYL CHAINLINK SCALE: 1/2" = 1'-0"



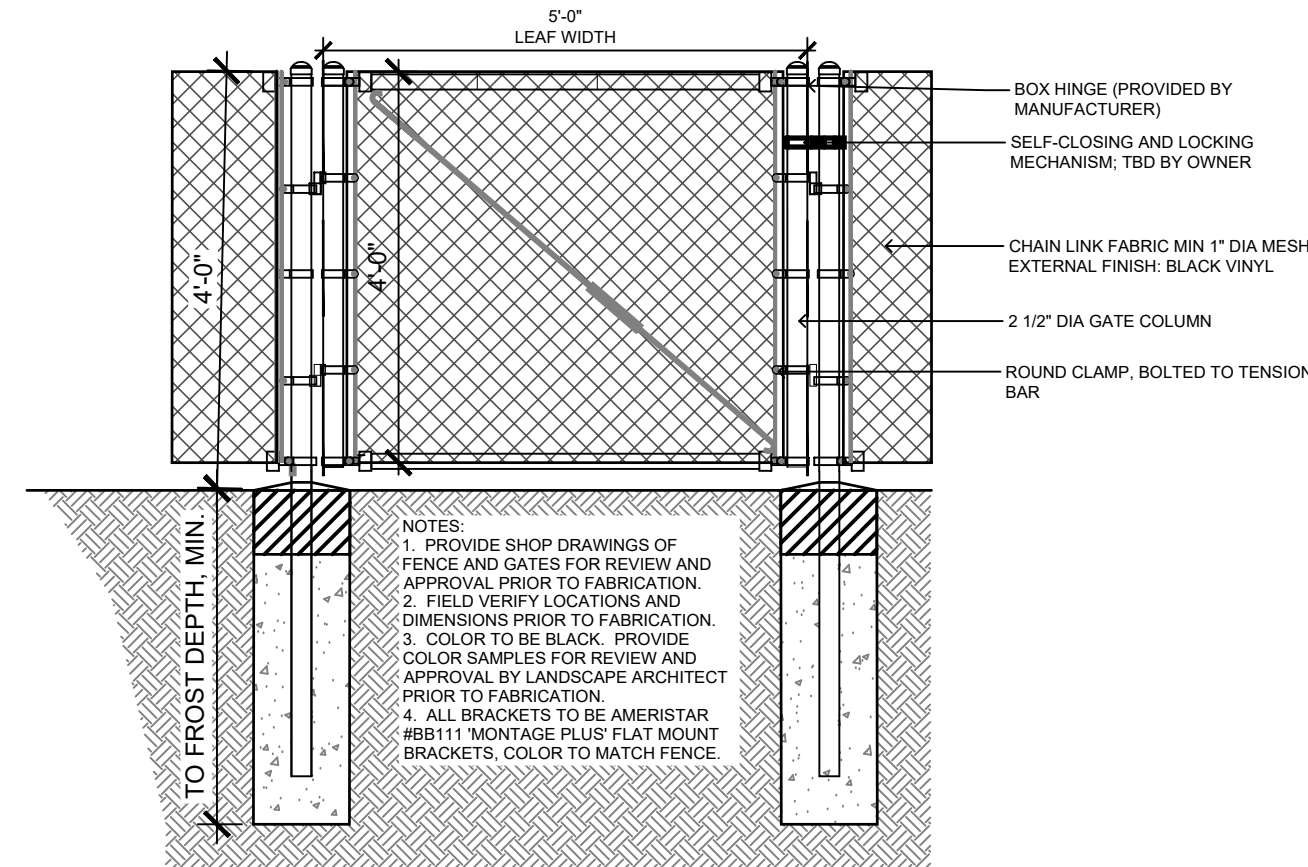
08 SP400 SECTION: CONCRETE CURB SCALE: 1 1/2" = 1'-0"



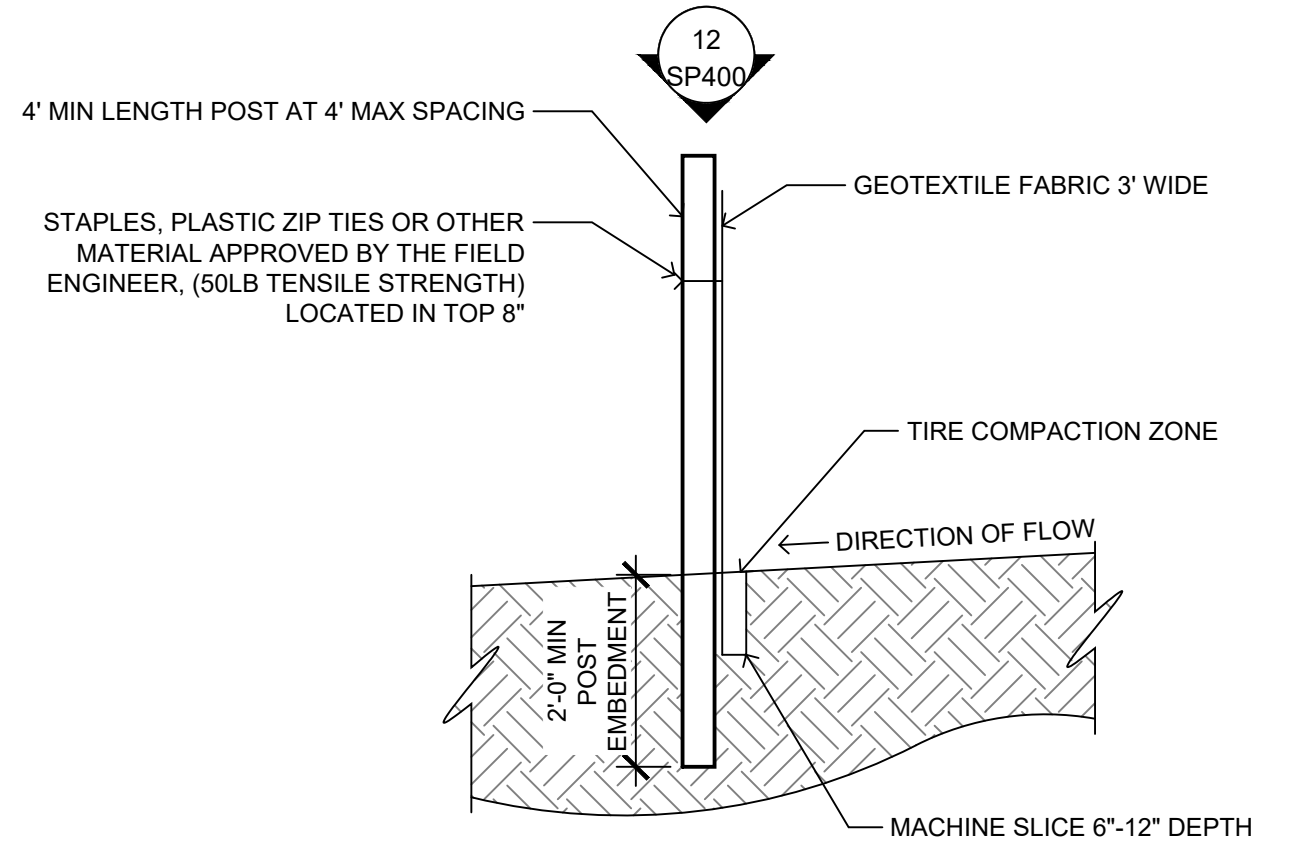
04 SP400 PLAN: SUMP INLET FILTER SCALE: 1" = 1'-0"



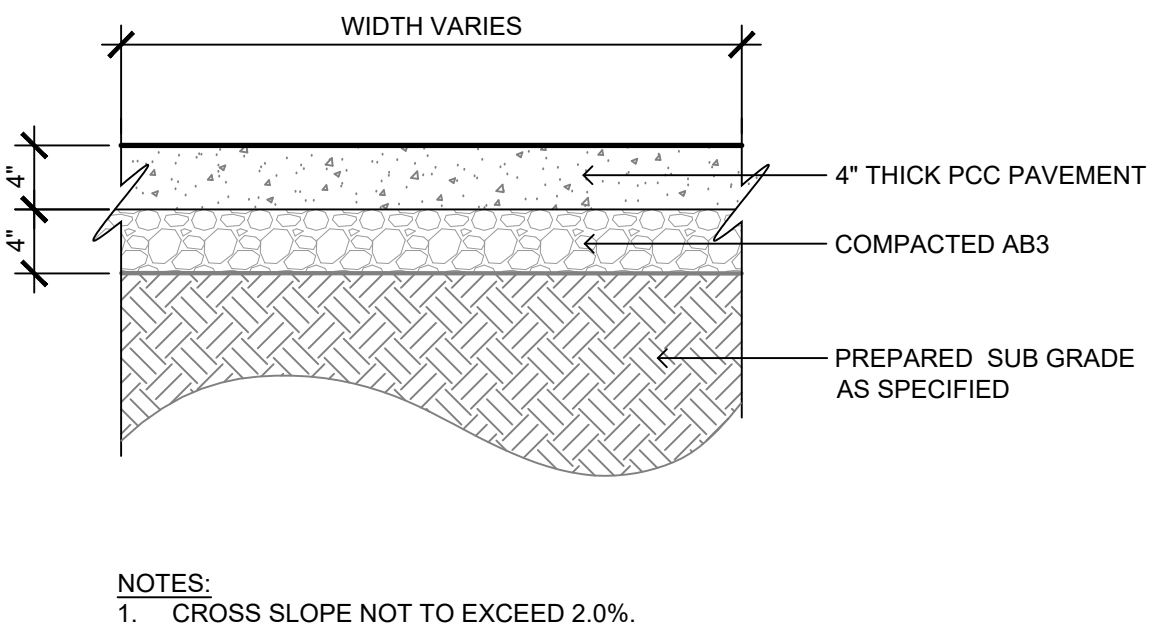
14 SP400 5" PCC CONCRETE COURT SCALE: 1" = 1'-0"



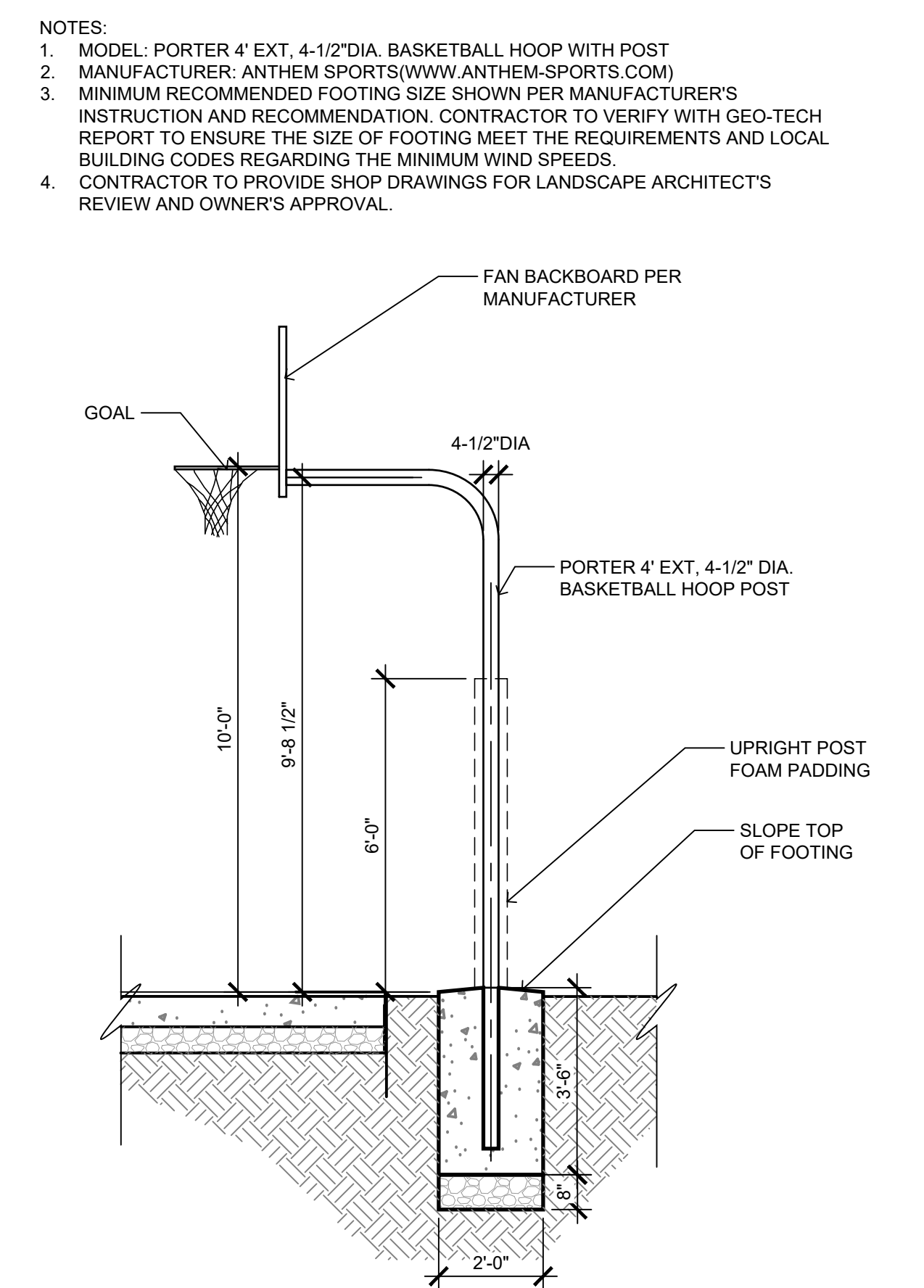
11 SP400 ELEVATION: GATE VINYL CHAINLINK SCALE: 1/2" = 1'-0"



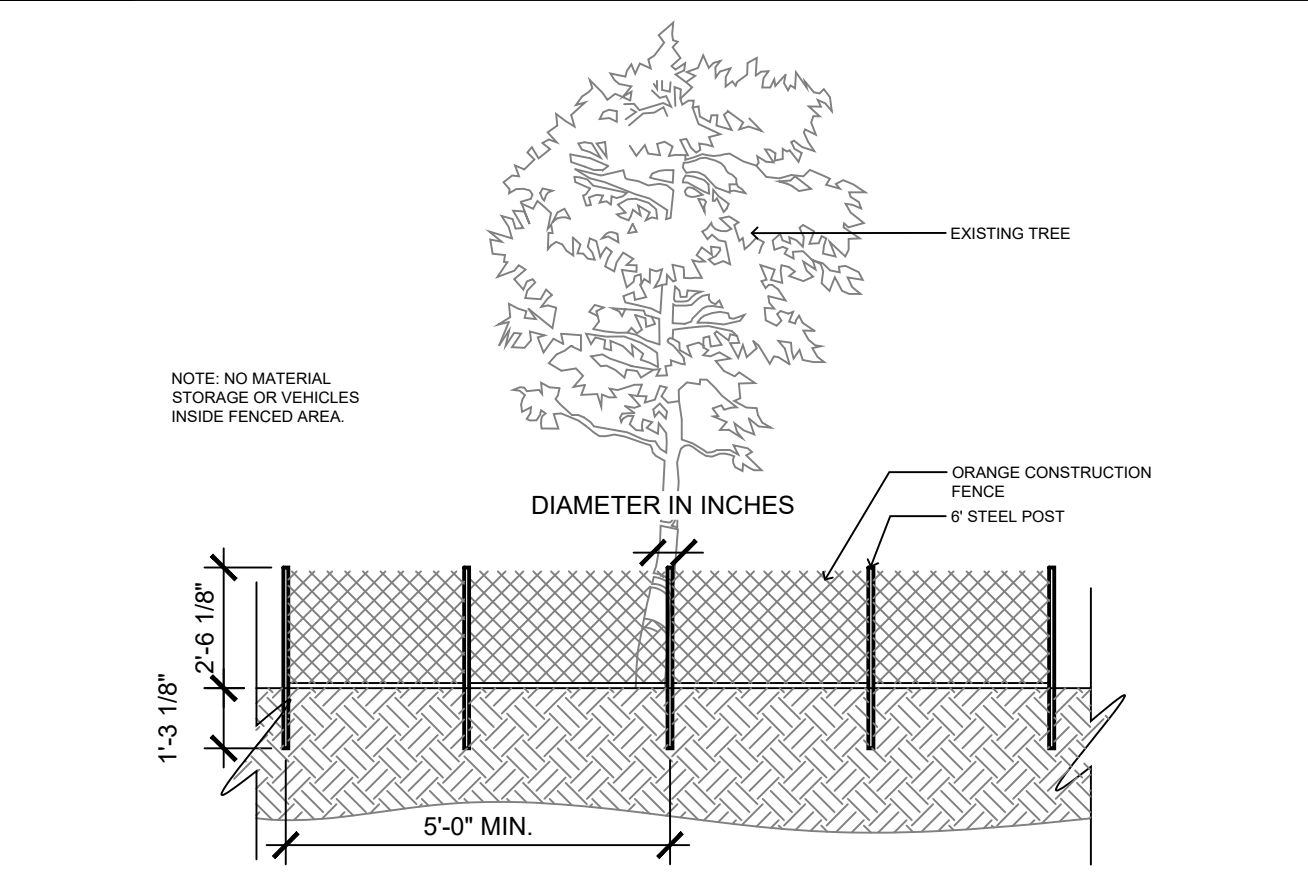
07 SP400 SECTION: SILT FENCE SCALE: 1/2" = 1'-0"



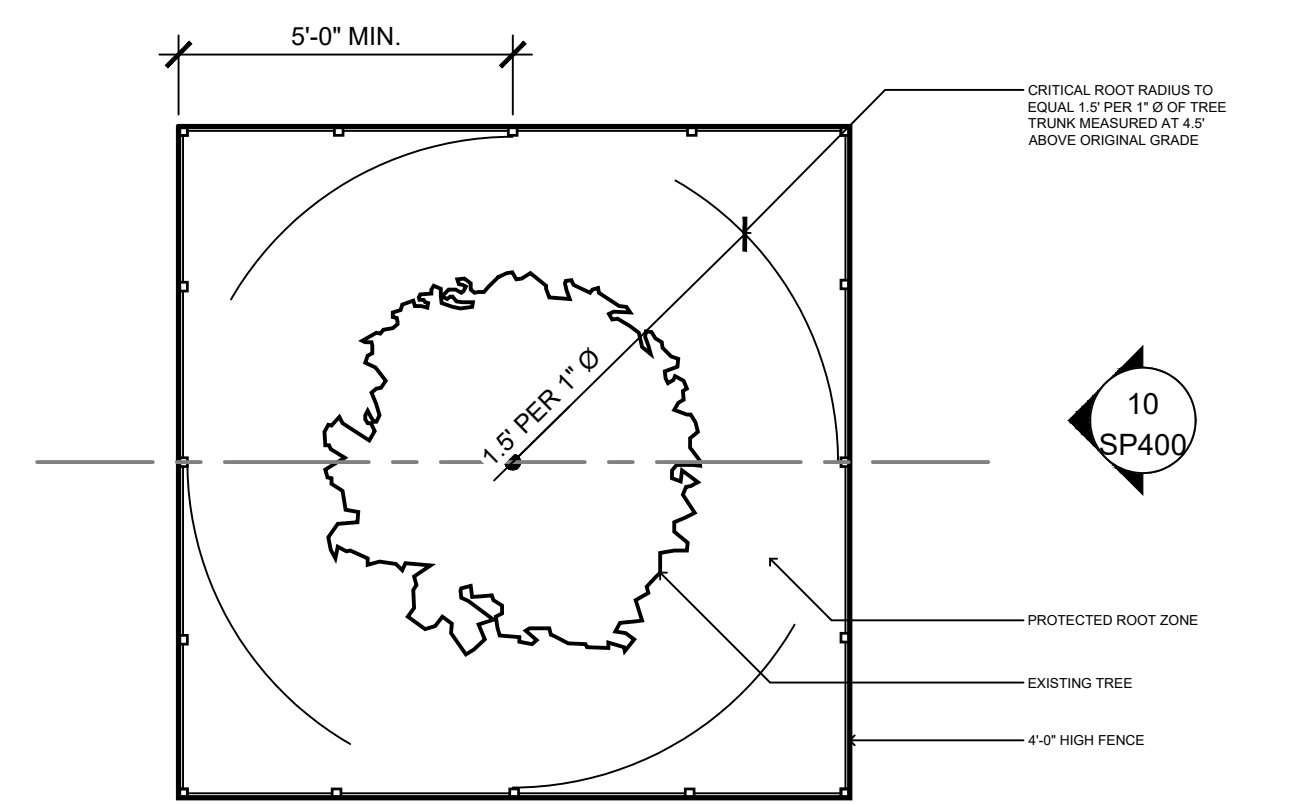
03 SP400 4" PCC CONCRETE SCALE: 1" = 1'-0"



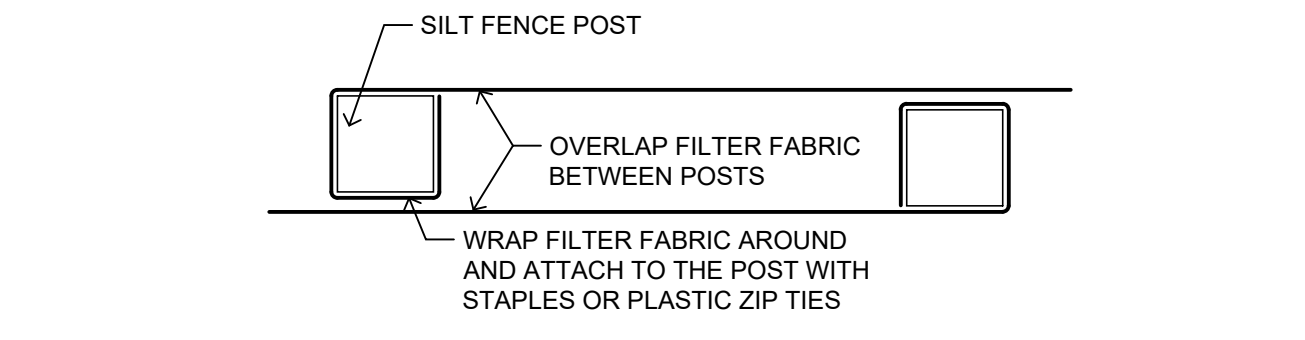
13 SP400 ELEVATION: BASKETBALL GOAL POST SCALE: 3/8" = 1'-0"



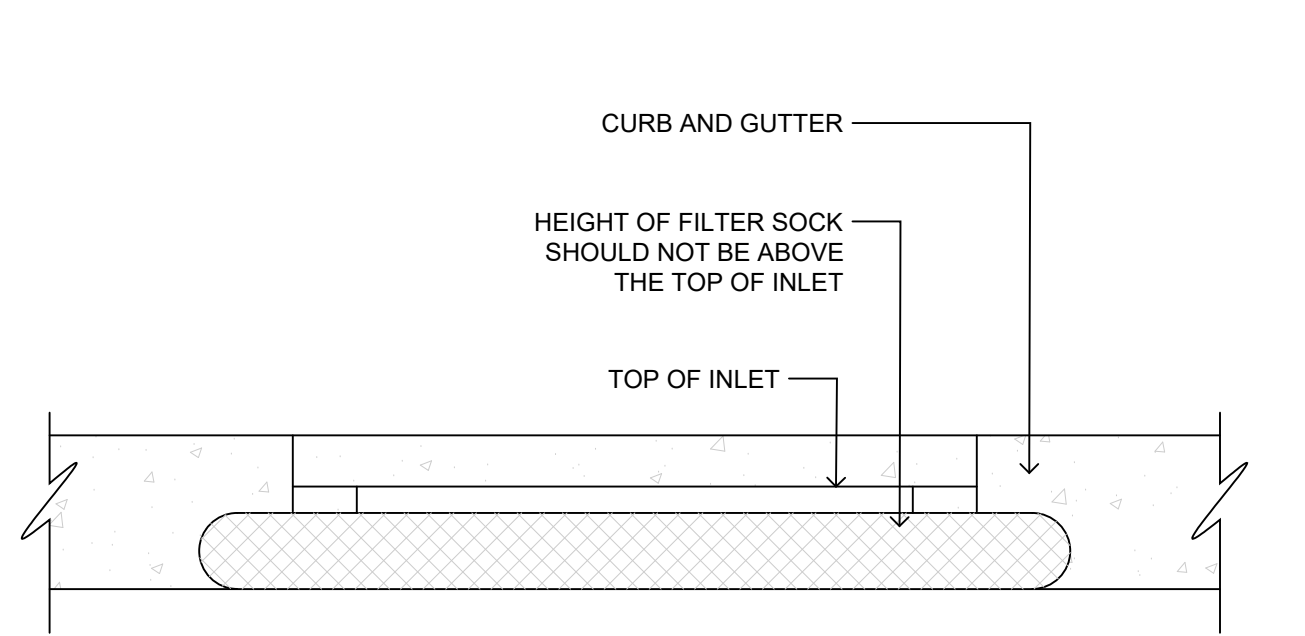
10 SP400 ELEVATION: TREE PROTECTION SCALE: 1/4" = 1'-0"



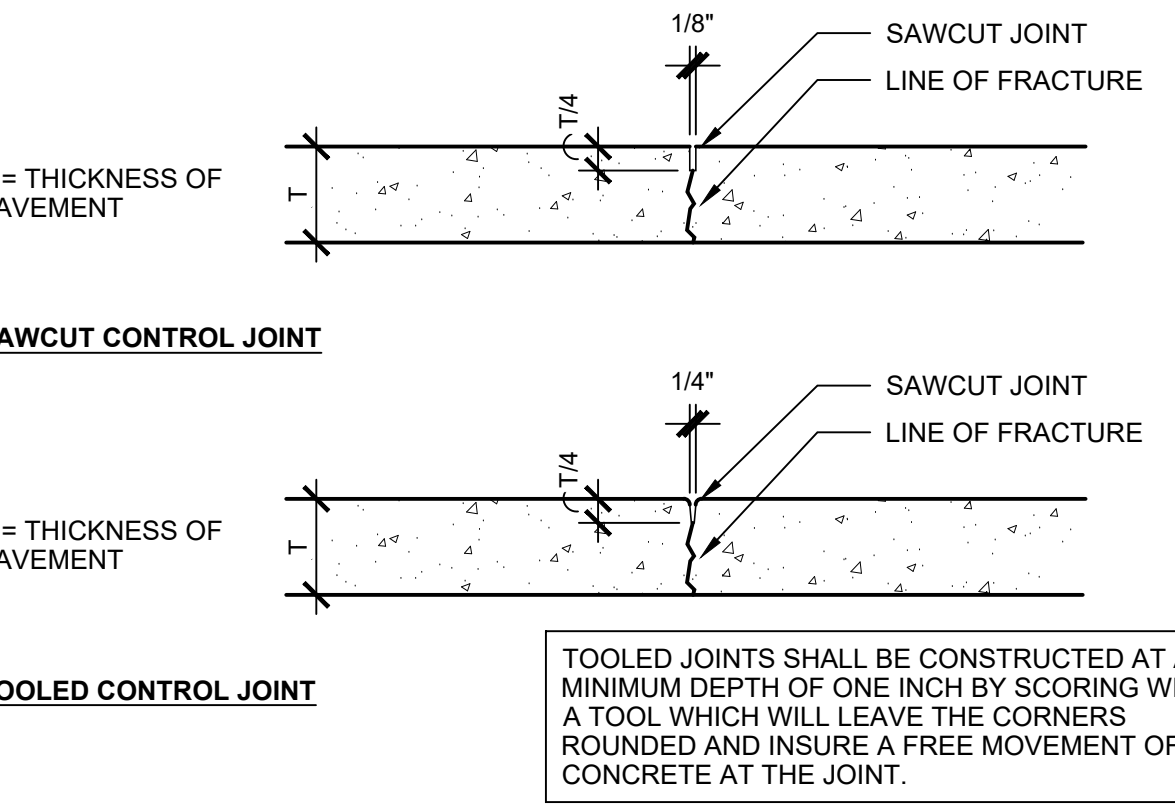
09 SP400 PLAN: TREE PROTECTION SCALE: 1/4" = 1'-0"



06 SP400 PLAN: JOINING SILT FENCE SECTIONS SCALE: 1 1/2" = 1'-0"

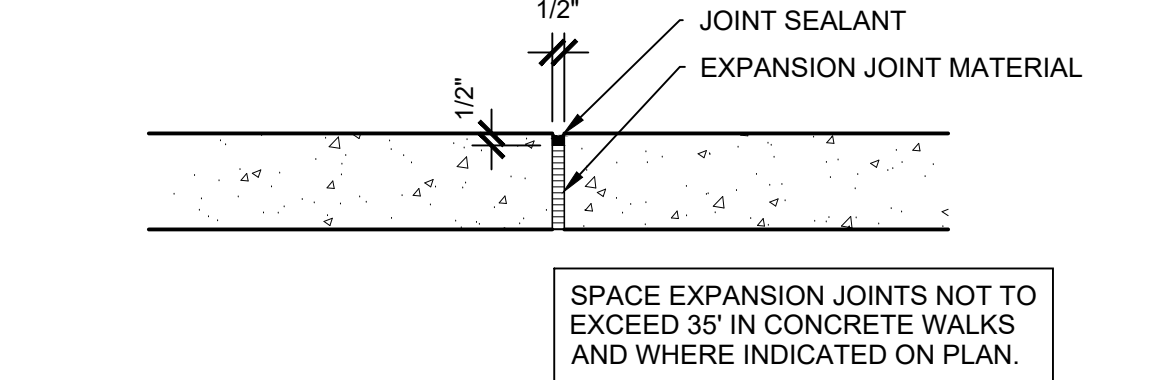


05 SP400 ELEVATION: SUMP INLET FILTER SCALE: 1" = 1'-0"

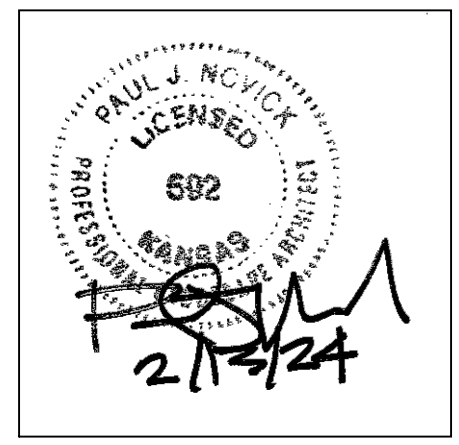


02 SP400 CONTROL JOINT SCALE: 1 1/2" = 1'-0"

ALL EXPANSION JOINTS IN WALKS SHALL BE SEALED WITH A SELF LEVELING URETHANE JOINT SEALANT.
 ASTM C920, MULTI-COMPONENT (M), GRADE P, CLASS 25, TRAFFIC (T) EXPOSURE. COLOR TO BE MANUFACTURERS STANDARD GRAY OR LIMESTONE.
 CLEAN, PRIME, AND BACK JOINTS AS RECOMMENDED BY SEALANT MANUFACTURER. INSTALL IN ACCORDANCE WITH ASTM C1193.
 CLEAN OFF EXCESS SEALANT AND SMEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND MATERIALS APPROVED IN WRITING BY THE SEALANT MANUFACTURER.



01 SP400 EXPANSION JOINT SCALE: 1 1/2" = 1'-0"



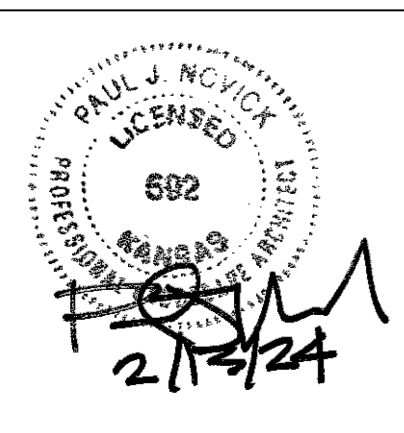
Revision Schedule

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MOHAWK PARK PHASE 2

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SITE DETAIL

SP401

COURT NOTES:

A. COATING NOTES:

- THE CONCRETE SURFACE SHALL BE CLEAN PRIOR TO APPLYING COLOR COAT.
- IT SHALL BE DRY AND FREE OF DUST, DIRT DURING THE APPLICATION OF THE PAVEMENT SURFACE SYSTEM.
- TO CORRECT MINOR SURFACE IRREGULARITIES, APPLY A FILLER COAT. CHECK THE FILLER COAT COMPATIBILITY WITH THE COLOR SURFACE SUPPLIER.
- APPLY AT LEAST ONE COAT OF ACRYLIC RESURFACER AND AT LEAST 2 COATS OF 'LIQUID APPLIED' CUSHIONING SYSTEM TO THE CONCRETE BASE.
- CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION SPECIFICATIONS

B. PICKLEBALL COURT MARKING NOTES:

- ALL WHITE LINE STRIPING SHALL BE 2" WIDE EXCEPT FOR BASE LINES WHICH SHALL BE 4" WIDE WHITE.
- DIMENSIONS GIVEN ARE MEASURED TO THE OUTSIDE OF THE LINE EXCEPT FOR THE CENTER SERVICE LINE AND THE CENTER MARK, BOTH OF WHICH SHALL BE ON THE CENTERLINE OF THE COURT.
- PLAYING LINES SHALL NOT VARY MORE THAN 1/4" FROM THE EXACT MEASUREMENTS.

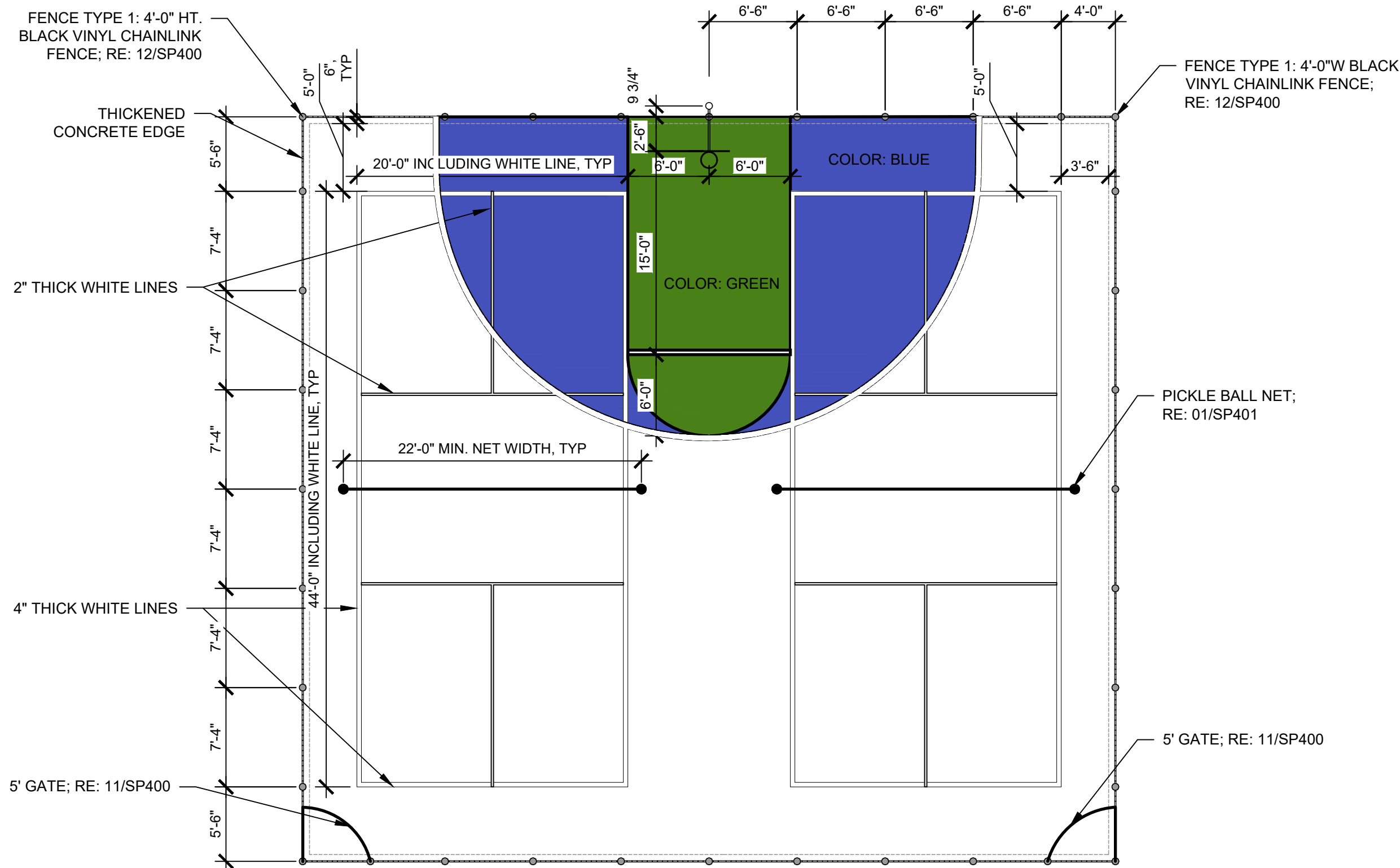
C. PROJECT COMPLETION:

- UPON COMPLETION OF WORK THE CONTRACTOR SHALL CAREFULLY CLEAN-UP AND REMOVE ALL LEFT OVER MATERIALS SO AS TO RETURN THE WORK SITE TO THE CONDITION IT WAS PRIOR TO CONSTRUCTION ACTIVITIES.

NOTES - BASKETBALL COURT COLORS

- 3 POINT LINE AREA: BLUE
- INNER AREA: GREEN
- OTHER LINES: WHITE
- CONTRACTOR TO PROVIDE TWO 6"X6" SAMPLES OF THE IN-BOUND COURT COLOR. LANDSCAPE ARCHITECT AND OWNER TO CHOOSE FROM THE BLUE AND THE GREEN COLOR SECTION SAMPLES.

SHOP DRAWINGS REQUIRED



SCALE 1/8"=1'-0"

NOTES:

- CONTRACTOR TO SUBMIT FOR SIGNAGE PERMIT THROUGH THE COMMUNITY DEVELOPMENT DEPARTMENT

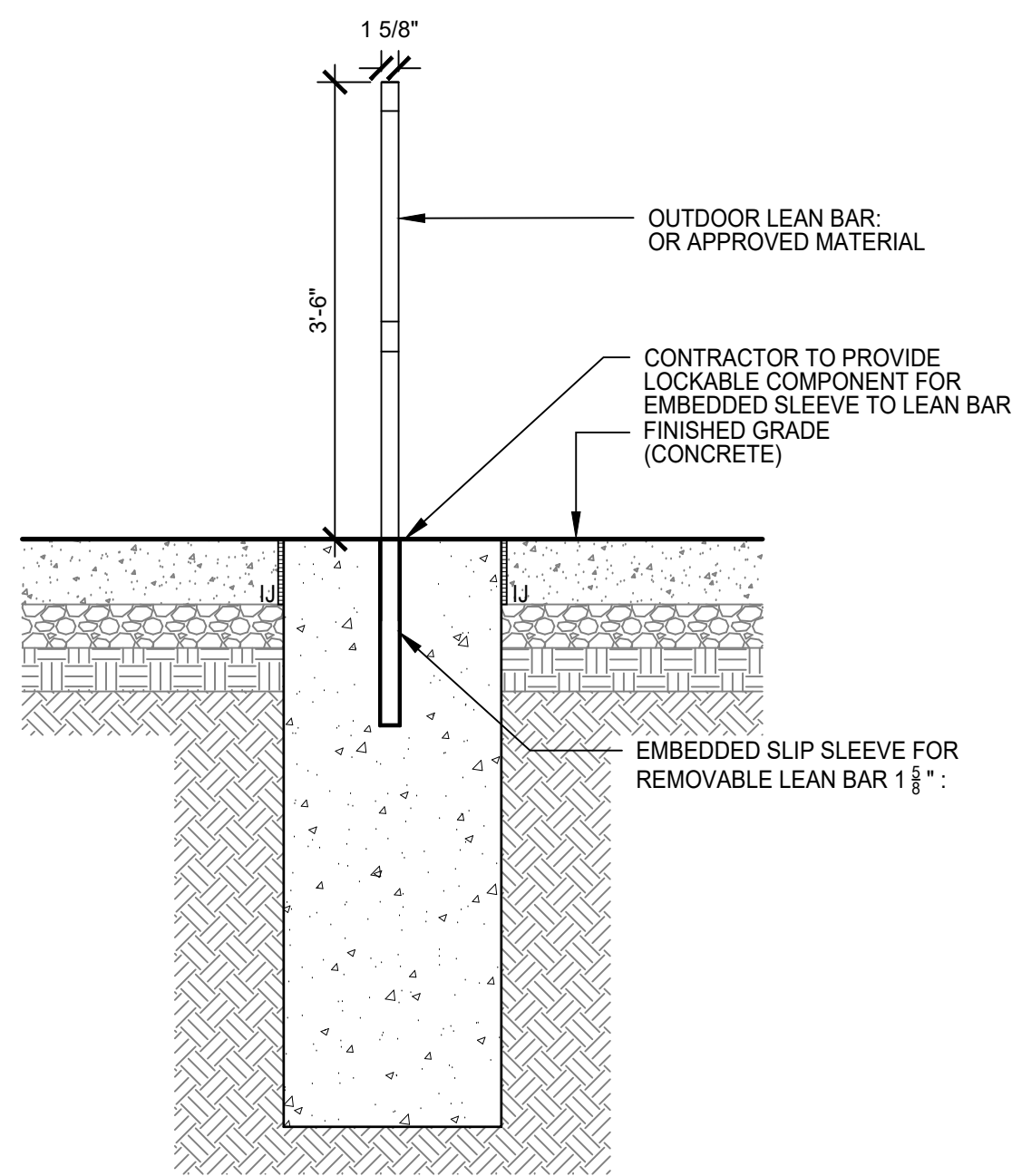


05 SP401 DETAIL: SIGNAGE N.T.S.

UNLINE RAIL

MFR: UNLINE OR APPROVED EQUAL
 MODEL NO: (H-62976L)
 SIZE: 1 5/8" DIAMETER STEEL PIPE WITH 21" HIGH WELDED MIDRAIL.
 COLOR: POWDER COATED - CLASSIC BLACK
 CONTACT: www.UNLINE.COOM

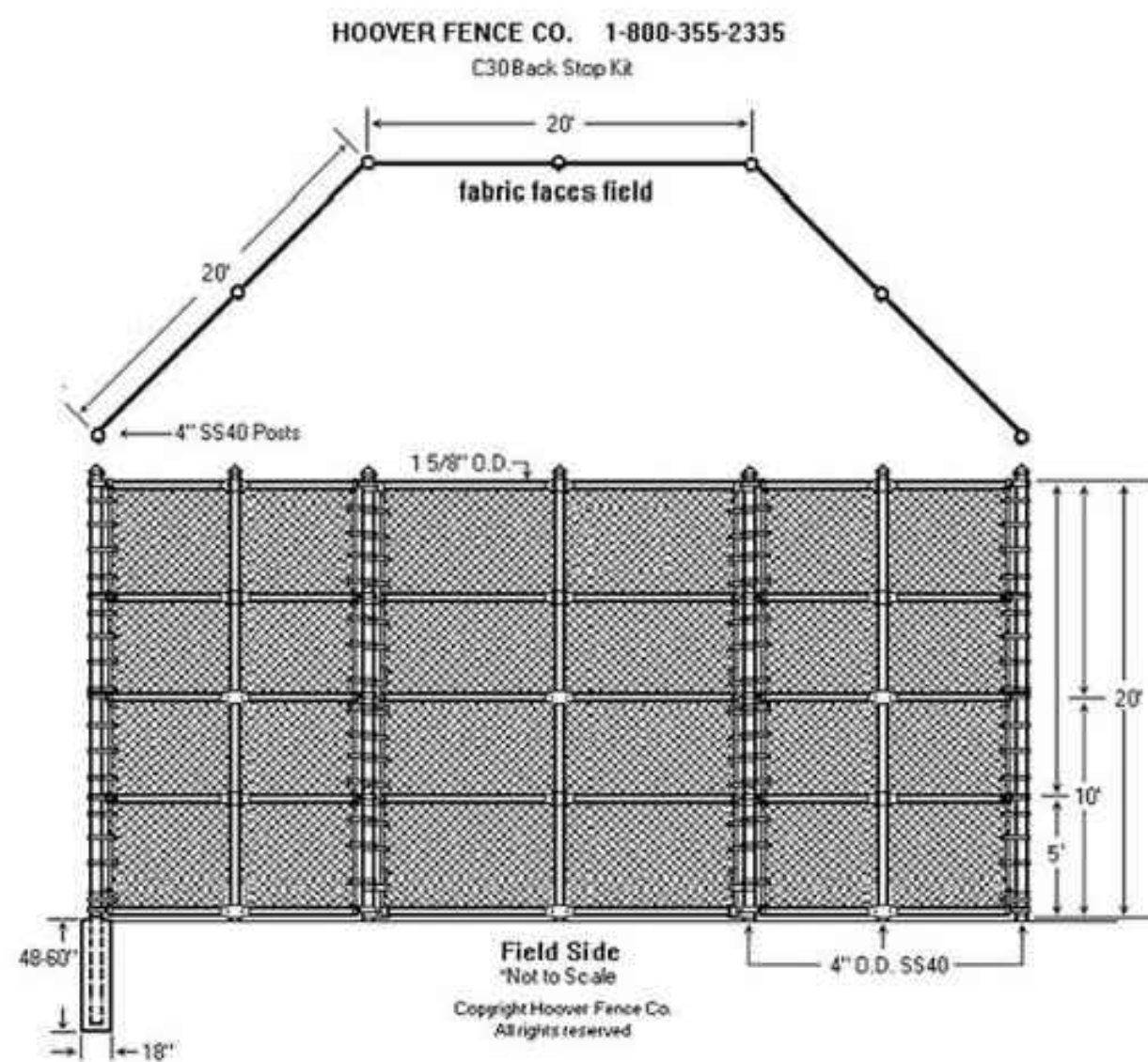
SHOP DRAWINGS REQUIRED



04 SP401 DETAIL: EMBEDDED SLEEVE WITH REMOVABLE LEAN BAR SCALE: 3/4" = 1'-0"

BACKSTOP KIT, 20' WIDE, 20' WINGS, 20' HIGH

MFR: HOOVER FENCE CO. OR AS APPROVED EQUAL
 MODEL NO: (Model #BS-C30)
 SPEC: 9 GAUGE GALVANIZED CHAIN LINK
 CONTACT: www.hooverfence.com



03 SP401 DETAIL: BACKSTOP N.T.S.

PICKLE BALL NET

MFR: ONCOURT OFFCOURT PICKLENET DELUXE OR AS APPROVED EQUAL
 MODEL NO: (Model #OO250)
 COLOR: WHITE
 CONTACT: www.pickleballcentral.com



01 SP401 SECTION: MOVEABLE PICKLEBALL NET N.T.S.

THE LINE SHOWN ABOVE IS EITHER AN ORIGINAL OR A COPY OF THE ORIGINAL SHEET'S ORIGINAL SCALE SIZE

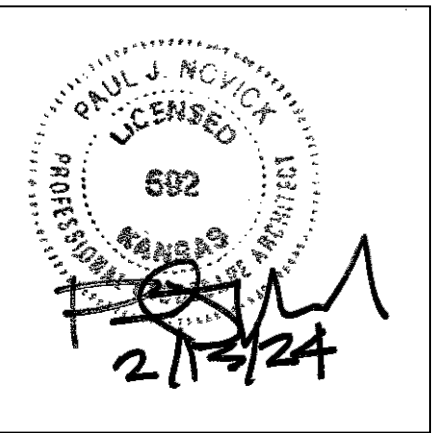
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 THE SQUARES ABOVE ARE COLOR MATCHES TO THE ORIGINAL SHEET'S ORIGINAL SCALE SIZE. IF PRINTED CORRECTLY, THE SQUARES SHOULD BE IDENTICAL TO THE ORIGINAL SHEET'S ORIGINAL SCALE SIZE.

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STANDARD DETAIL

SP402

THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL OR A
 COPY OF THE ORIGINAL.

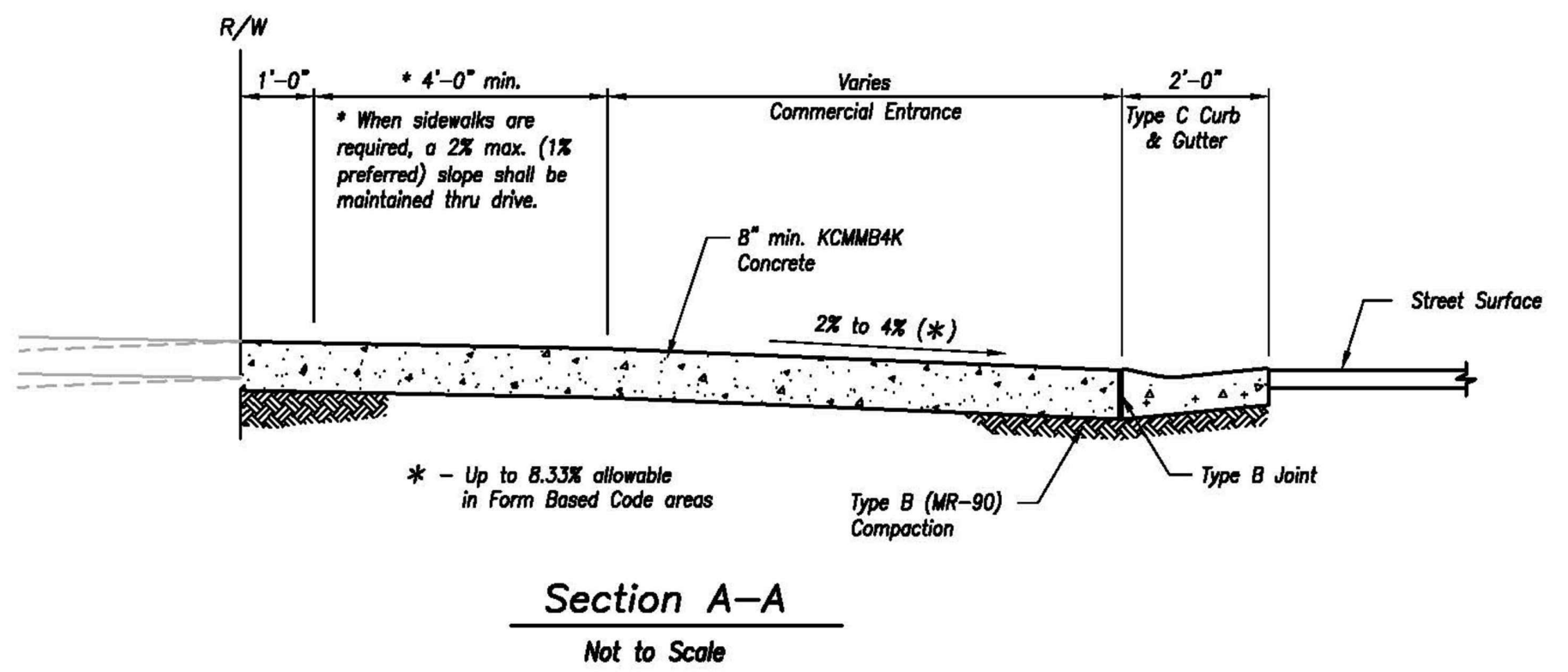
D

C
 THE SQUARES ABOVE ARE COLOR
 MATCHES TO THE ORIGINAL DRAWING.
 IF PRINTED CORRECTLY,
 THEY SHOULD APPEAR AS SHOWN.

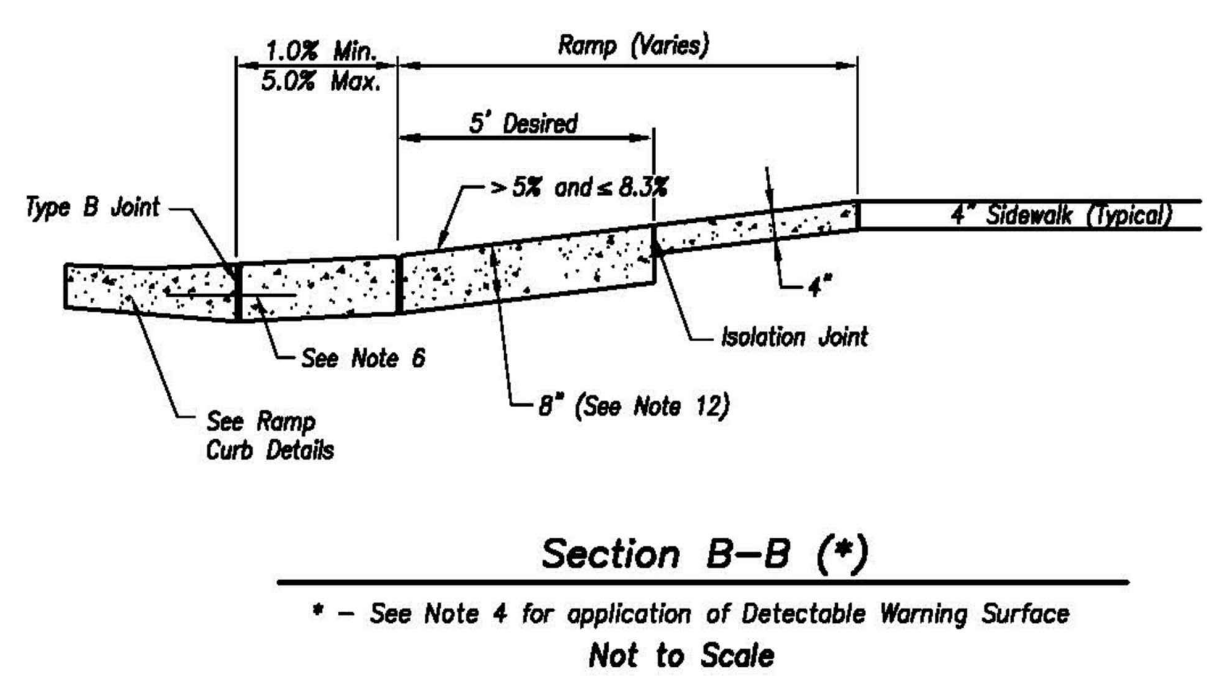
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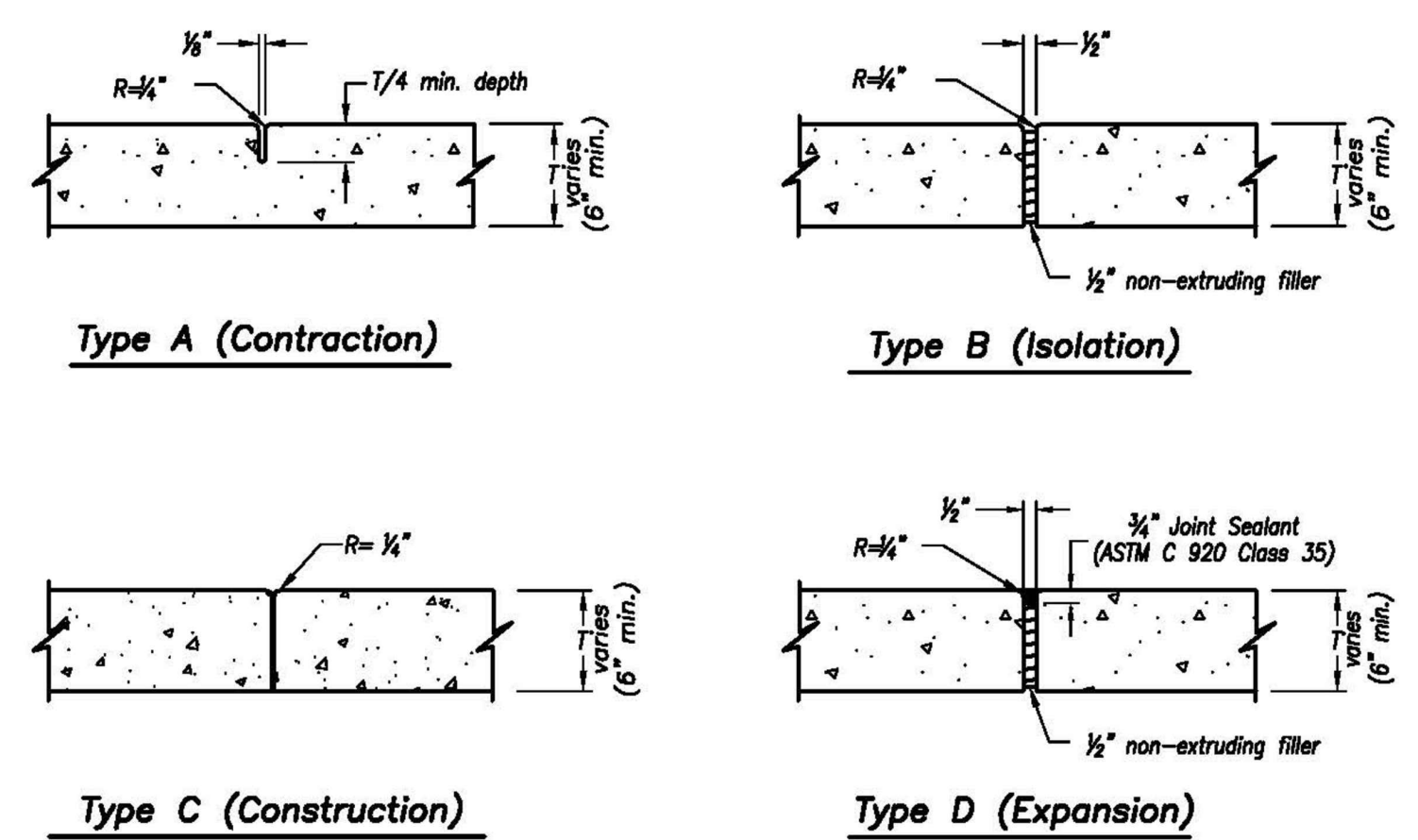
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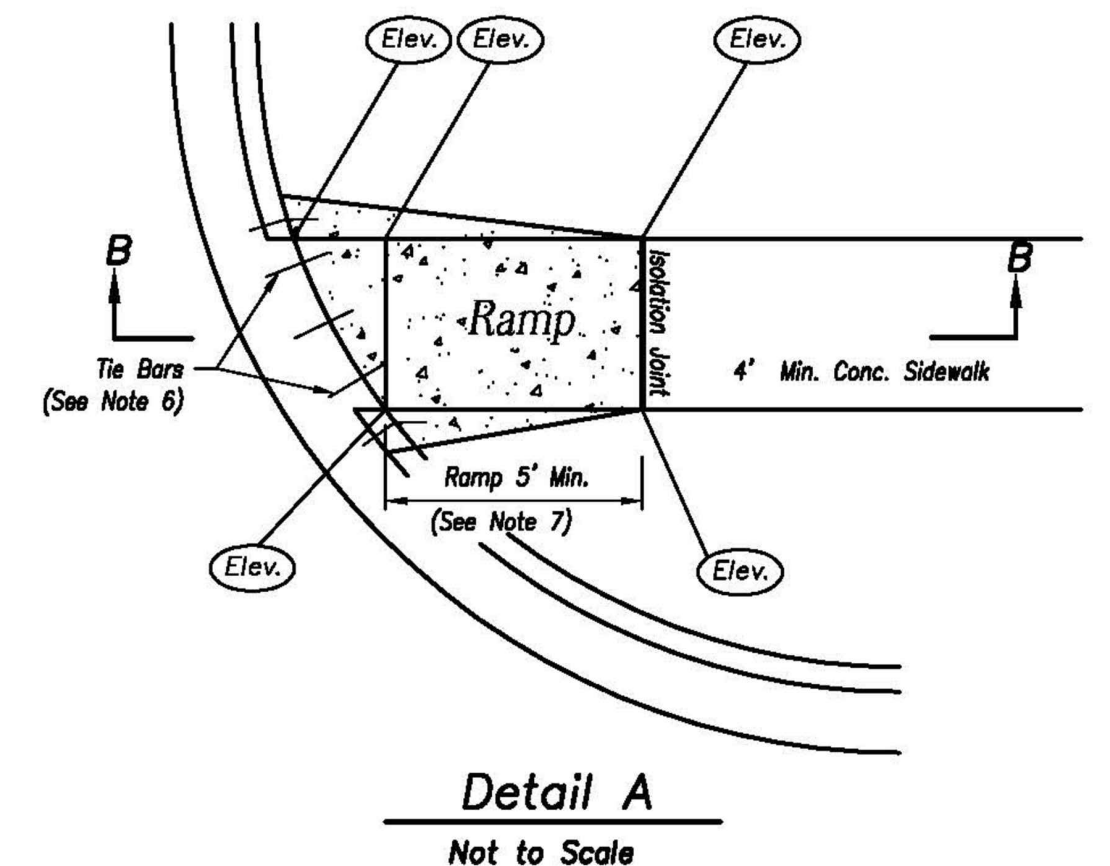
Section A-A
 Not to Scale



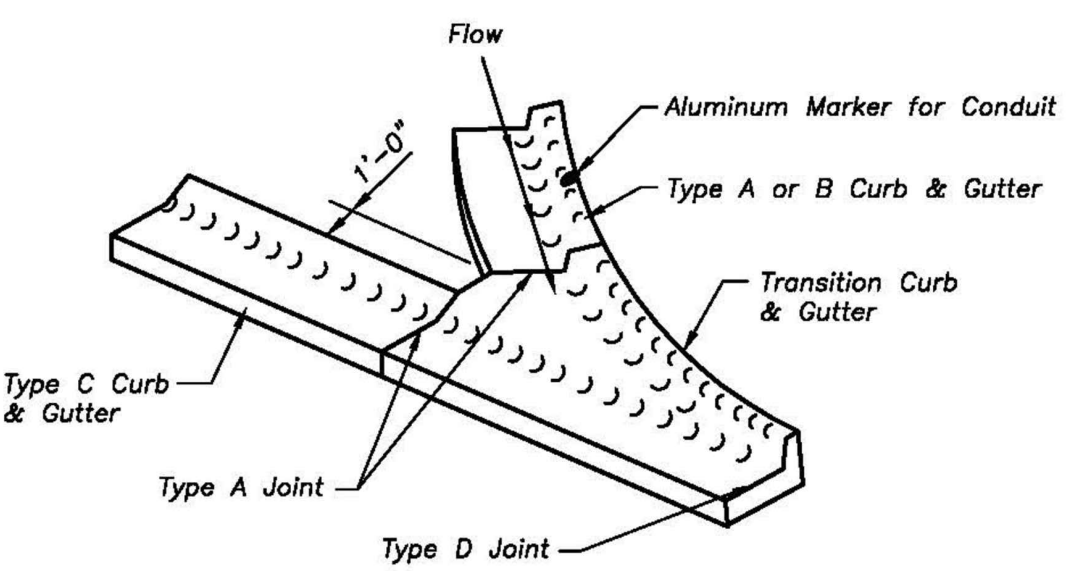
Section B-B (*)
 * - See Note 4 for application of Detectable Warning Surface
 Not to Scale



JOINT DETAILS
 Not to Scale



Detail A
 Not to Scale



Detail B
 Not to Scale

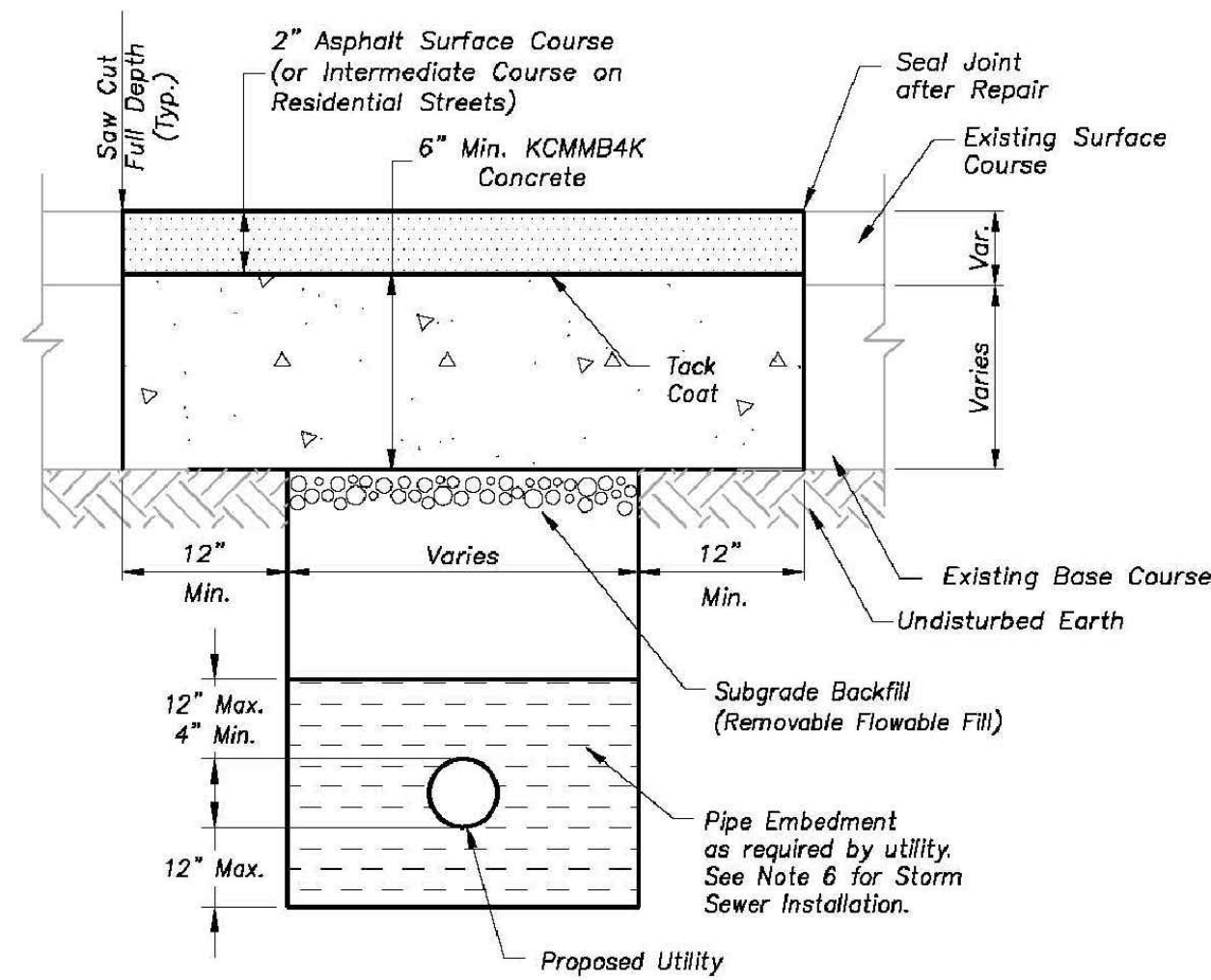
COMMERCIAL ENTRANCE DETAIL

Commercial Drive Notes:

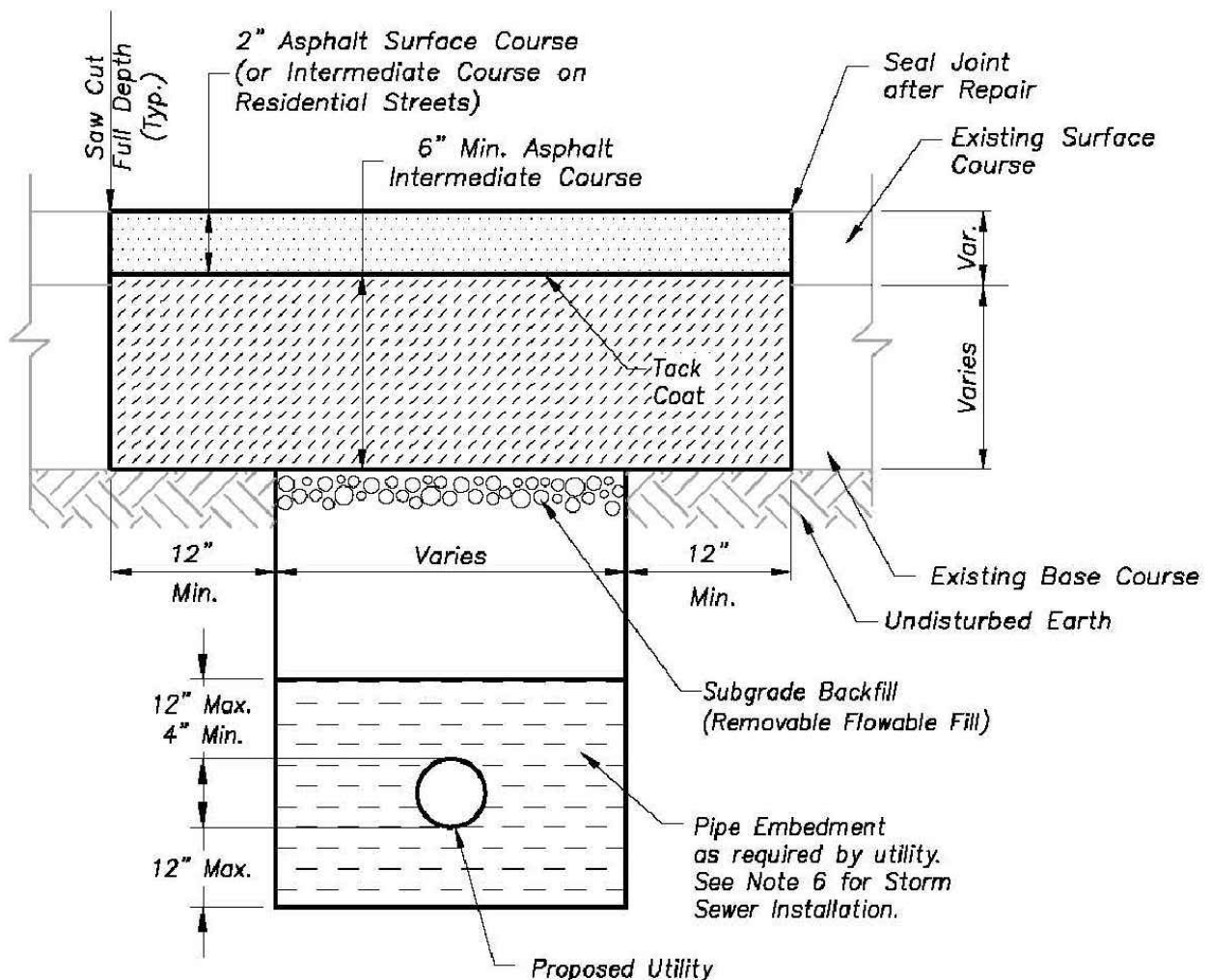
- Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted.
- KCMBAK Concrete shall be used throughout.
- Concrete pavement shall be jointed with Type A joints. No jointed slab shall exceed 12' x 12'.
- Detectable warning surfaces are not required at non-signalized entrances.
- ADA compliance will be measured at points labeled (Elev.).
- Install 18" tie bars #4 epoxy coated @ 18" o.c. and through wings as shown.
- Sidewalk Ramp shall be lengthened to provide ADA compliant slope, but need not exceed 15'.
- ADA maximum ramp slope = 1%/ft.
 ADA maximum cross slope = 2%.
- Top of curb elevations shall be shown at quarter points and curb returns.
- Any additional steel reinforcement shall be approved by the City Engineer.
- See Curb Replacement Detail for additional requirements.
- Only 8" thick panels will be paid for as "RAMP". Sidewalk behind isolation joint will be paid for as "4" SIDEWALK".

THE LINE SHOWN ABOVE IS WITHIN THE ORIGINAL SCALE SIZE SHEETS ORIGINAL SCALE SIZE

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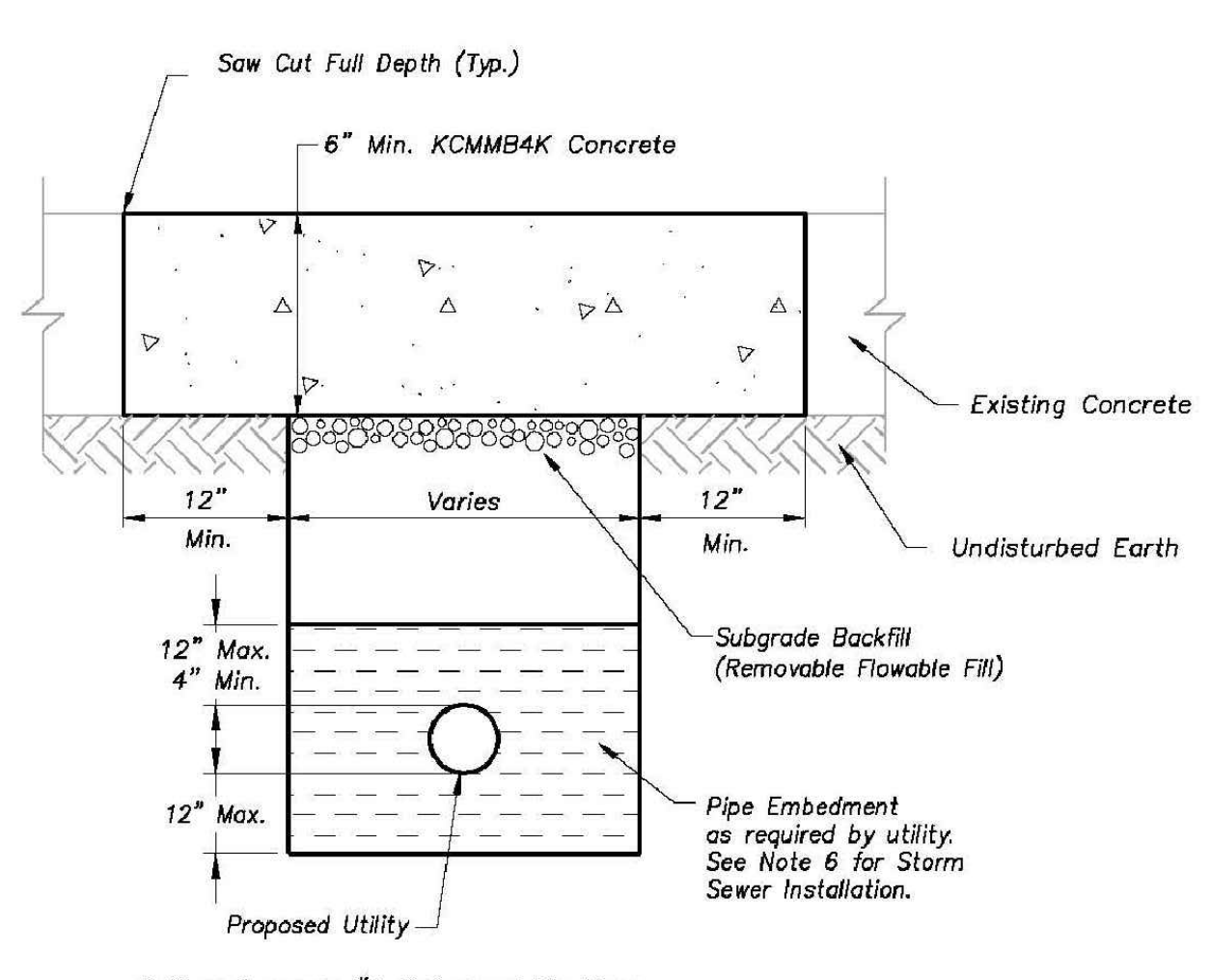


Asphaltic Concrete Street Repair Type I
 (Concrete Base /w Asphaltic Concrete Surface)

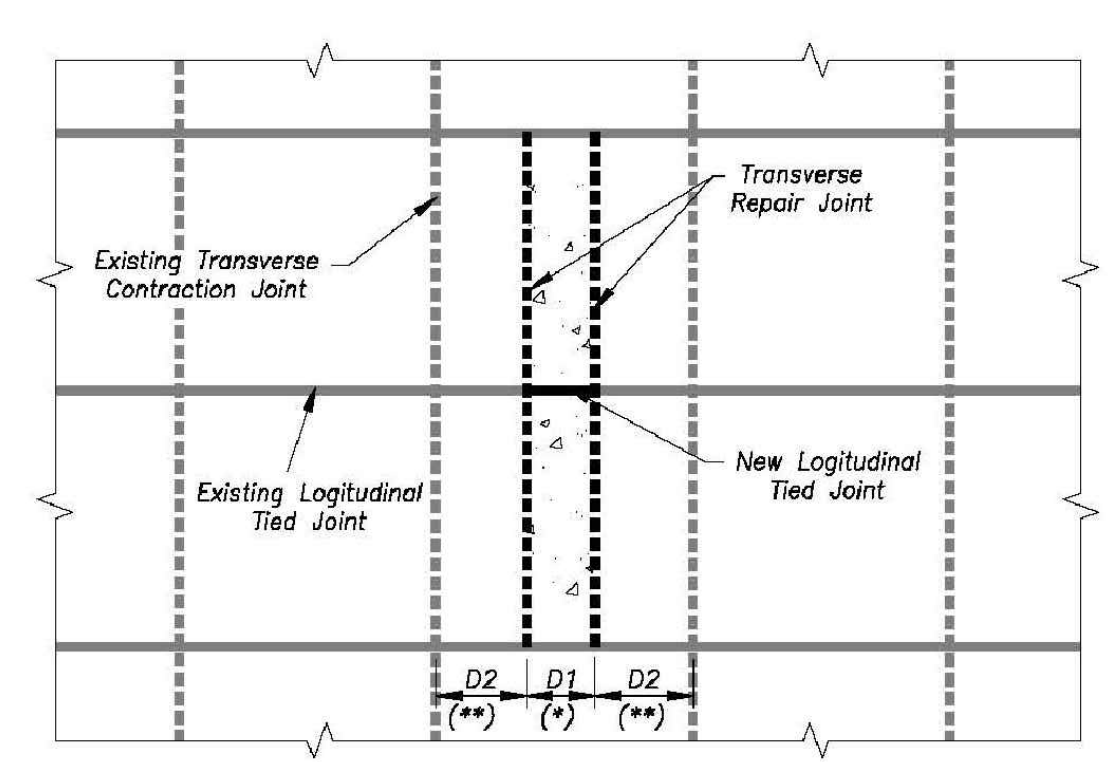


Asphaltic Concrete Street Repair Type II *
 (Full Depth Asphaltic Concrete)

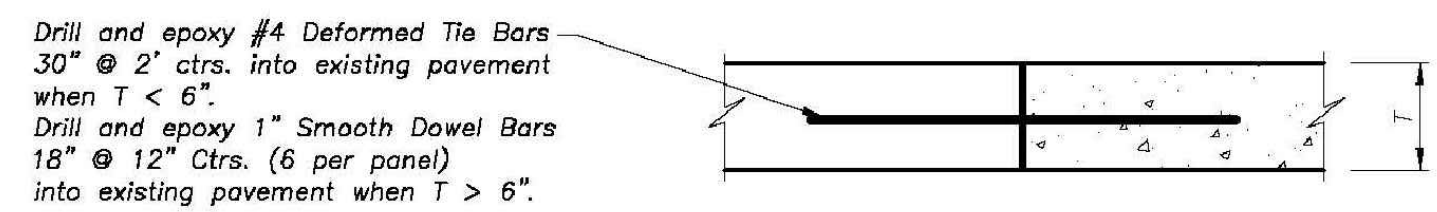
* - Type II Street Repair May be Used Only if Excavation Width Exceeds 6'



Portland Cement Concrete Street Repair **
 ** - May be Used Only on Existing Concrete Streets

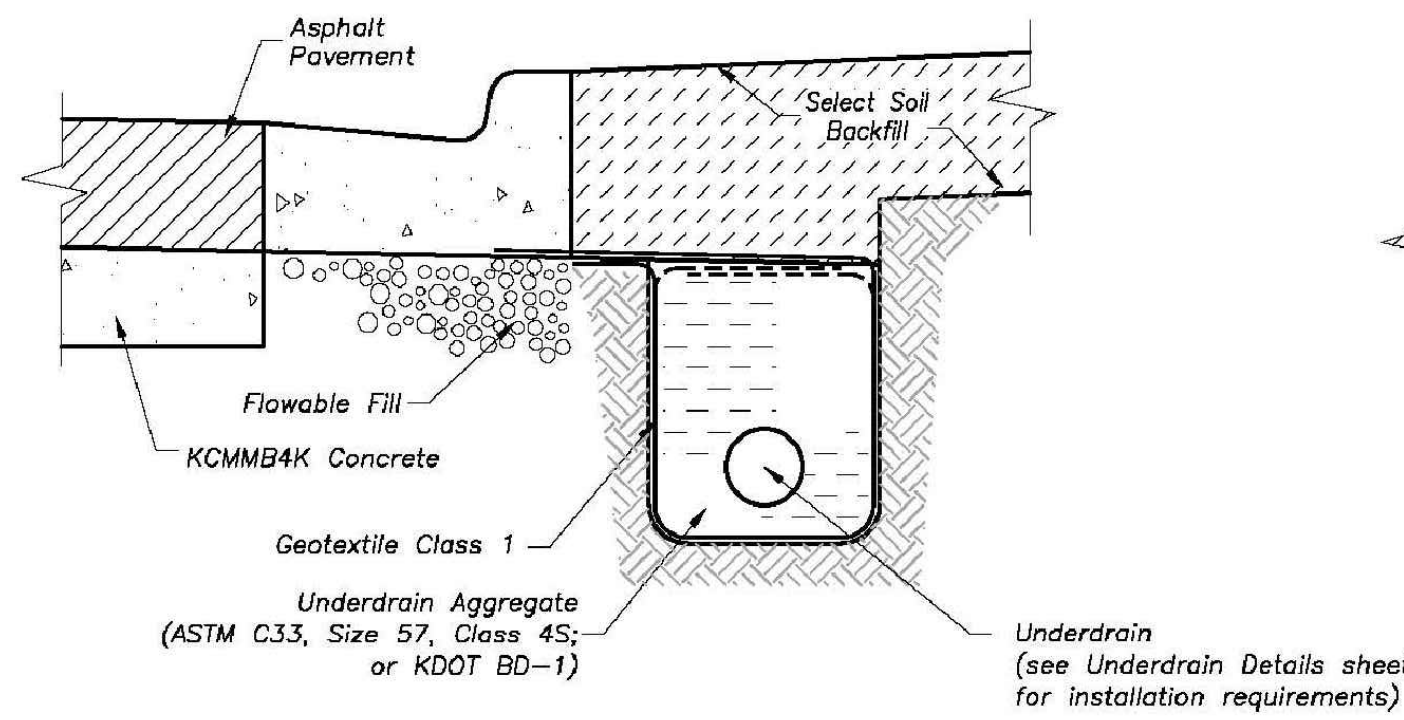


(*) - When street repair (D1) is greater than 50% of the slab, replace the entire slab.
 (***) - When the distance between the repair joint and the existing joint (D2) is less than 3', replace panel to the existing joint. (See Transverse Repair Joint Detail). When D2 is more than 3' - see Transverse Repair Joint Detail.

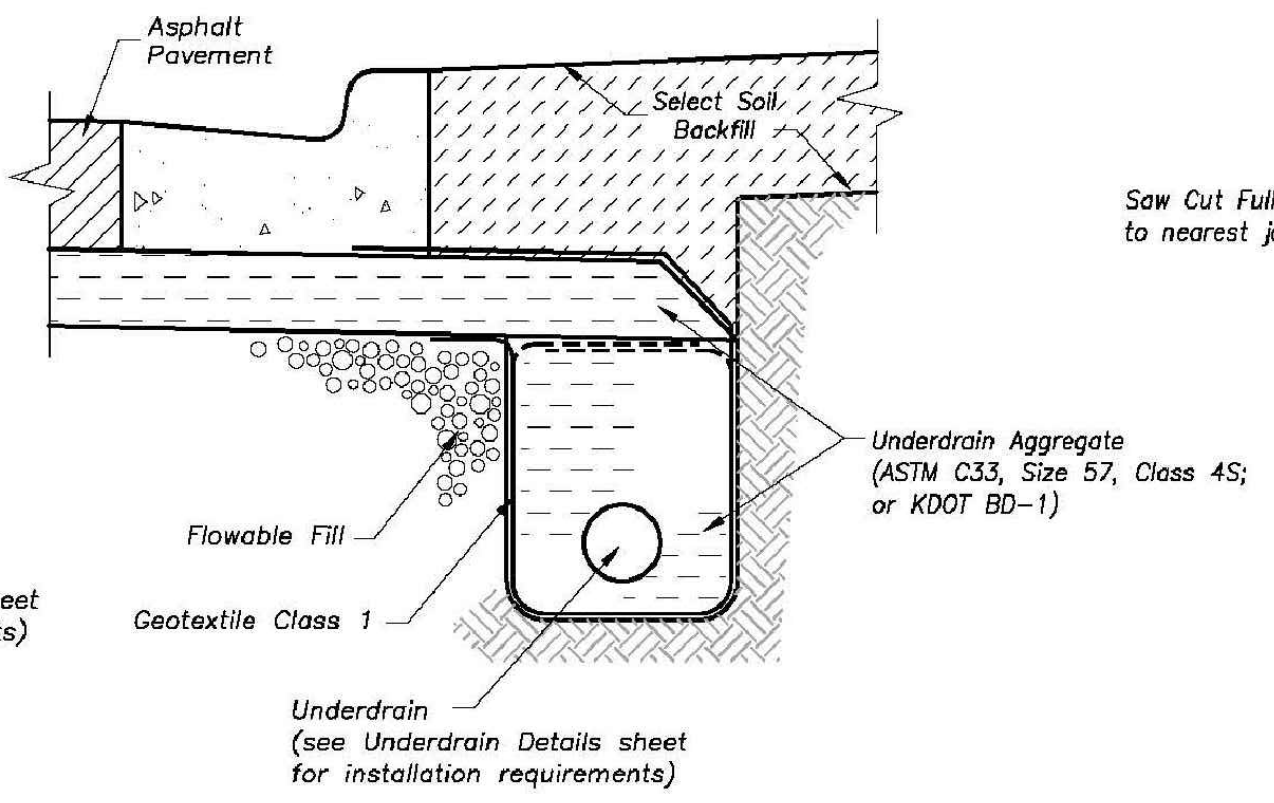


Transverse Repair Joint
 (See Sht.13 for additional Joint Details)

C



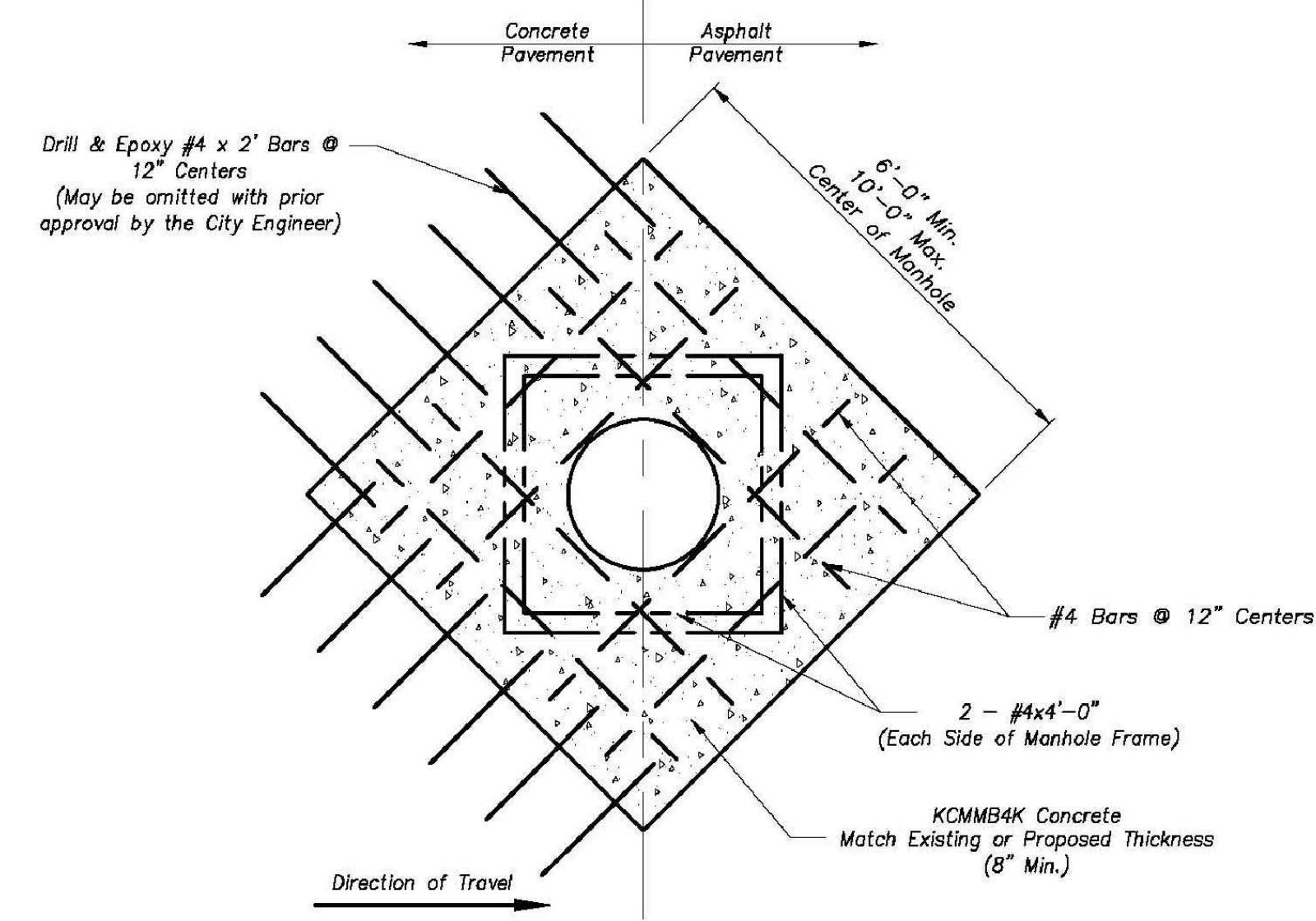
Pipe Underdrain Repair



Pipe Underdrain Repair with OP Special

- Street Repair Notes:**
- Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted. In restoring the Right-of-Way, the Permittee guarantees its work and shall maintain it for 24 months following its completion.
 - The Manual on Uniform Traffic Control Devices, the Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations, and the latest edition of the O.P. Manual of Infrastructure Standards are incorporated except as otherwise noted.
 - Any excavation left open overnight in any roadway shall be securely plated. Plates shall be properly anchored and all edges of the plate shall be ramped with asphalt surface mix to prevent rotting.
 - All KCMMB4K Concrete, removable flowable fill and asphaltic concrete shall conform to OPMC Title 13.
 - When trenching through OP Special Aggregate Base, flowable fill shall be used to backfill the trench to the elevation of the bottom of the OP Special Aggregate Base, then backfilled and compacted to the bottom of pavement with ASTM C33, Size 57, Class 4S aggregate.
 - For Storm Sewer Installation pipe embedment shall be filled to 4" above the top of pipe.
 - Permanent pavement markings shall be replaced with like materials within fourteen days after the pavement surface has been replaced, unless otherwise authorized by the City Engineer.

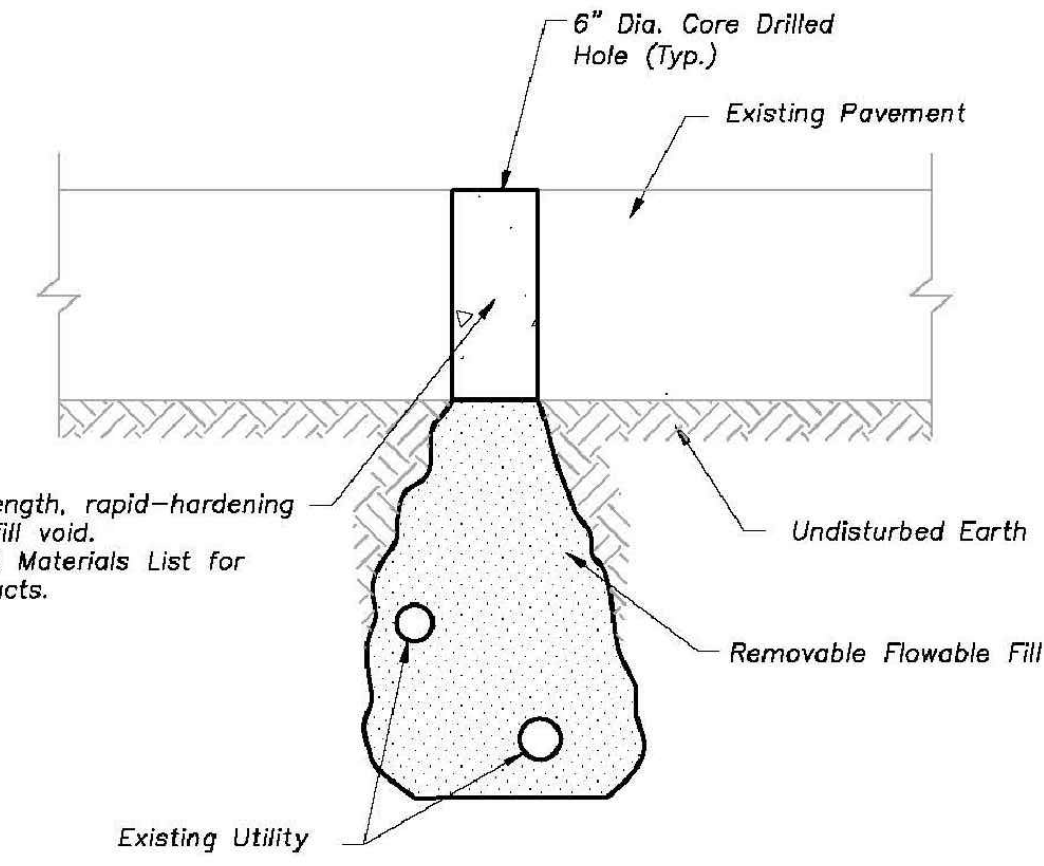
B



Manhole in Paved Area ****

**** - Detail applies to improved thoroughfares and all improved concrete streets. For existing concrete streets, coordinate with existing joints.

A

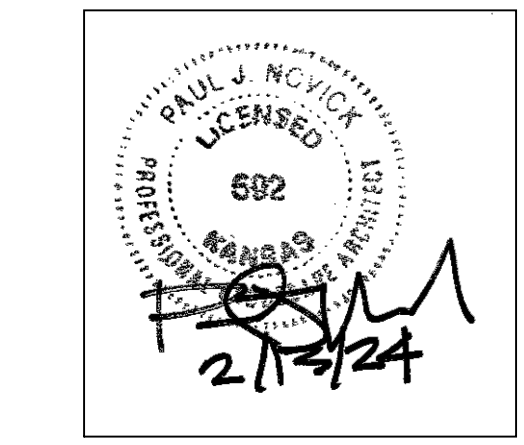


Utility Investigation Excavation Repair ***

- *** - for repair areas under 1 s.f.
- Utility Investigation Excavation Repair Notes:**
- For repair areas greater than 1 s.f. or non-core drilled pavement cut see Street Repair Detail.
 - Contact the City Representative regarding approved bonding agent.
 - High Strength, rapid hardening concrete may be substituted with non-shrink grout, having a minimum compressive strength of 3000 psi in 24 hours and conforming to ASTM C1107, with a 2" cap of asphalt repair material.

Repair Under Curb, Sidewalk or Driveway

- Repair under curb/sidewalk/driveway notes:**
- Curbs, sidewalks and driveways shall be sawed full depth, removed and replaced to nearest contraction or expansion joint.
 - If adjacent section of curb, sidewalk or driveway is cracked, chipped or otherwise damaged, it shall also be removed and replaced to nearest joint.
 - All concrete used in this work shall be KCMMB4K.



Revision Schedule		
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MOHAWK PARK PHASE 2
 MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
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Date	YYYY-MM-DD

STANDARD DETAIL

SP403

PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING/REMARKS
CANOPY TREES						
AS	6	Acer saccharum 'JFS-Caddo2'	FLASHFIRE SUGAR MAPLE	3" CAL	B&B	SPECIMEN QUALITY
GT	9	Gleditsia triacanthos f. inermis 'Skyline'	SKYLINE HONEYLOCUST	3" CAL	B&B	SPECIMEN QUALITY
PT	8	Populus tremuloides 'NE Arb'	PRAIRIE GOLD ASPEN	3" CAL	B&B	SPECIMEN QUALITY
QR	10	Quercus rubra	NORTHERN RED OAK	3" CAL	B&B	SPECIMEN QUALITY
UA	6	Ulmus americana 'Pioneer'	PIONEER ELM	3" CAL	B&B	SPECIMEN QUALITY
ORNAMENTAL TREES						
AT	5	Asimina triloba	PAWPAW	2" CAL	B&B	SPECIMEN QUALITY
CC	3	Cercis canadensis 'JN2 The Rising Sun'	THE RISING SUN EASTERN REDBUD	2" CAL	B&B	SPECIMEN QUALITY
MV	5	Magnolia virginiana	SWEETBAY MAGNOLIA	2" CAL	B&B	SPECIMEN QUALITY
SR	5	Syringa reticulata 'Ivory Silk'	JAPANESE TREE LILAC	2" CAL	B&B	SPECIMEN QUALITY
CONIFER TREES						
JC	10	Juniperus chinensis 'Torulosa'	TORULOSA JUNIPER	6' HT.	B&B	
PS	11	Pinus Strobus 'Fastigiata'	EASTERN WHITE PINE	6' HT.	B&B	
TO	13	Thuja occidentalis 'Green Giant'	GREEN GIANT ARBORVITAE	6' HT.	B&B	

MEADOW MIX

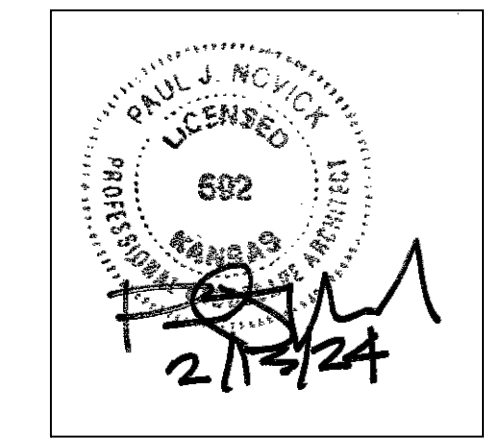
BC	Bouteloua curtipendula	SIDE OATS GRAMA	#1	CONT.	3'-0" O.C.
EC	Echinacea pallida	PALE PURPLE CONEFLOWER	#1	CONT.	3'-0" O.C.
PC	Phemeranthus caticynus	FAME FLOWER	#1	CONT.	3'-0" O.C.
SH	Sporobolus heterolepis	PRAIRIE DROPSEED	#1	CONT.	3'-0" O.C.
SL	Symphotrichum laeve	SMOOTH ASTER	#1	CONT.	3'-0" O.C.
SS	Schizachyrium scoparium 'Blue Heaven'	BLUE HEAVEN LITTLE BLUESTEM	#1	CONT.	3'-0" O.C.
TD	Tripsacum dactyloides	EASTERN GRAMA GRASS	#1	CONT.	3'-0" O.C.
TOTAL	33645 SF				
GRASS					
CD	APPROX 76,000 SF Cynodon dactylon	TALL FESCUE	SEED		

PLANTING NOTES:

- SEED ALL AREAS WITHIN CONTRACT LIMITS, NOT COVERED BY PAVING, BUILDINGS, OR SOD, UNLESS OTHERWISE NOTED.
- PLANT QUANTITIES ARE FOR INFORMATION ONLY; DRAWING SHALL PREVAIL IF CONFLICT OCCURS.
- NOTIFY LANDSCAPE ARCHITECT AFTER STAKING IS COMPLETED AND BEFORE PLANT PITS ARE EXCAVATED.
- CONTRACTOR SHALL PLACE WEED BARRIER AND CEDAR MULCH AROUND ALL TREES AND IN ALL PLANTING BEDS TO A DEPTH OF 3".
- KIND, SIZE AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK, ANSI 260-1992, OR MOST RECENT EDITION.
- THE CONTRACTOR SHALL REPORT SUBSURFACE SOIL OR DRAINAGE PROBLEMS TO THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL SHOW PROOF OF PROCUREMENT, SOURCES, QUANTITIES AND VARIETIES FOR ALL PERENNIALS, ORNAMENTAL GRASSES, AND ANNUALS WITHIN 21 DAYS FOLLOWING THE AWARD OF CONTRACT. TIMELY PROCUREMENT OF ALL PLANT MATERIAL IS ESSENTIAL TO THE SUCCESSFUL COMPLETION AND INITIAL ACCEPTANCE OF THE PROJECT.
- SUBSTITUTIONS SHALL ONLY BE ALLOWED WHEN THE CONTRACTOR HAS EXHAUSTED ALL SOURCES FOR THE SPECIFIED MATERIAL, AND HAS PROVEN THAT THE SPECIFIED MATERIAL IS NOT AVAILABLE. THE CONTRACTOR MUST PROVIDE NAME AND VARIETY OF SUBSTITUTION TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO TAGGING OR PLANTING. SUBSTITUTIONS SHALL BE NEAREST EQUIVALENT SIZE OF VARIETY OF PLANT HAVING SAME ESSENTIAL CHARACTERISTICS.
- ALL PLANT MATERIAL SHALL BE NURSERY GROWN, SOUND, HEALTHY, VIGOROUS AND FREE FROM INSECTS, DISEASE AND INJURIES, WITH HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES. SIZES SHALL BE EQUAL TO OR EXCEEDING SIZES INDICATED ON THE PLANT LIST. THE CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITY AS SHOWN ON THE DRAWINGS.
- STAKE OR PLACE ALL PLANTS IN FIELD AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT FOR APPROVAL BY THE OWNER PRIOR TO PLANTING.
- THE VARIOUS PLANTS IN PLANT MIXES TO BE DISPERSED RANDOMLY SO ALL SPECIES ARE SPREAD THROUGHOUT THE DESIGNATED PLANTING AREAS.
- APPROXIMATE TREE PLANTING DATE: BETWEEN SEPTEMBER AND OCTOBER 2023/4
- ALL DISTURBED AREAS FROM CONSTRUCTION SHALL BE RE-SEEDDED UNLESS CALLED OUT AS OTHER PLANTING. A 6' SEEDING BUFFER IS TO BE USED ALONG NEW CONCRETE PATHS
- ALL GRASSES, PERENNIALS AND ANNUALS HAVE BEEN VERIFIED BY THE NE KS REGION OF THE KANSAS STATE EXTENSION OFFICE FOR NATIVE CONFORMANCE AND NON INVASIVE SPECIES.

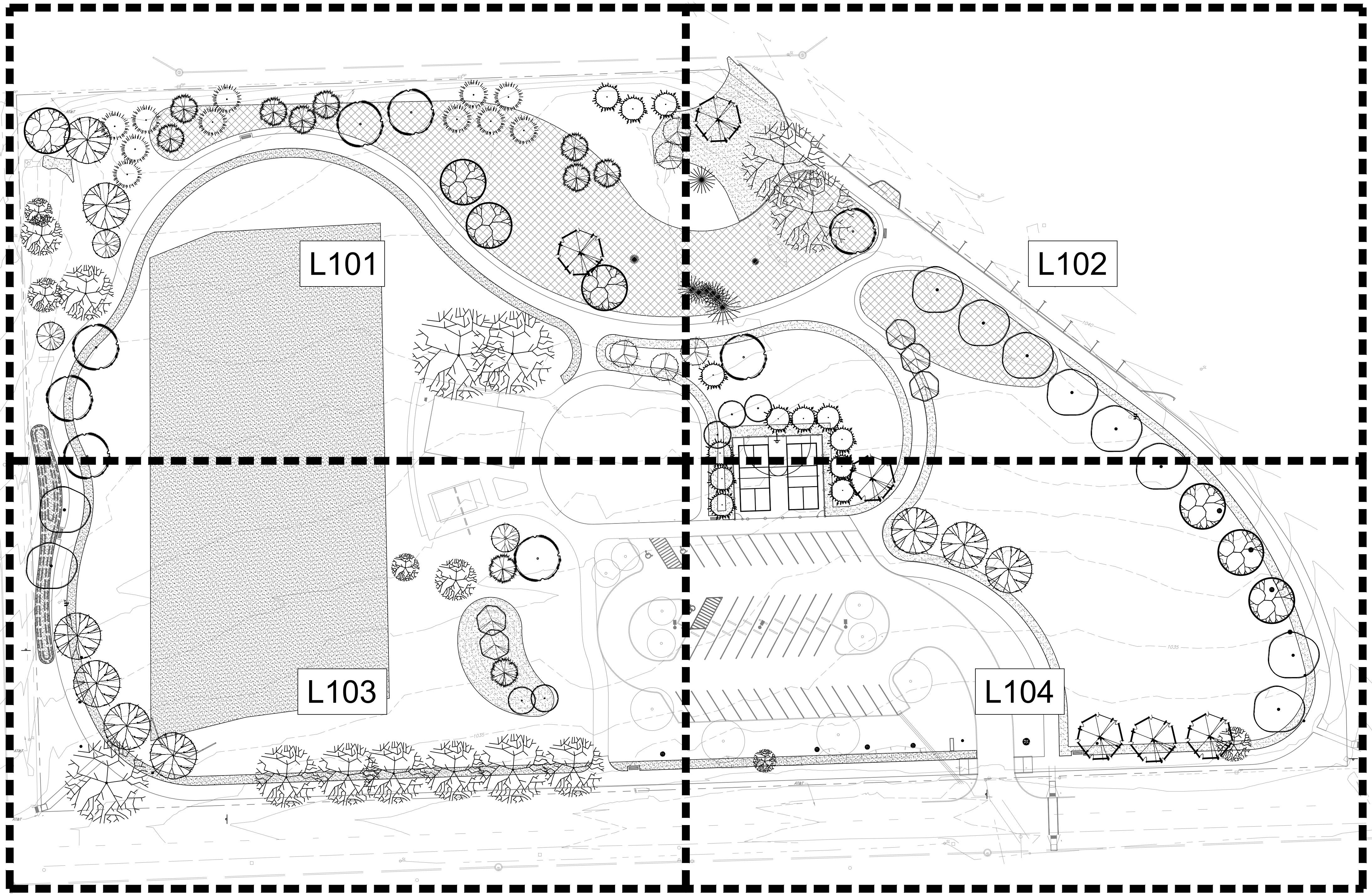


LANDSCAPE ARCHITECT
CONFLUENCE
 417 Delaware Street
 Kansas City, MO 64105
 816.531.7227
 www.thinkconfluence.com



Revision Schedule

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PLANTING PLAN

L100

01 L100 PLANTING PLAN



THE LINE SHOWN ABOVE IS
 EITHER A CENTERLINE OR
 SHEET'S ORIGINAL LARGE SIZE

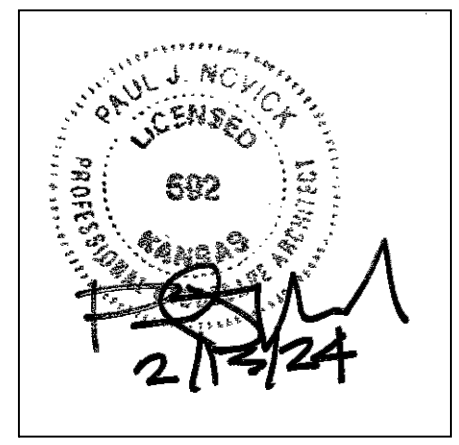
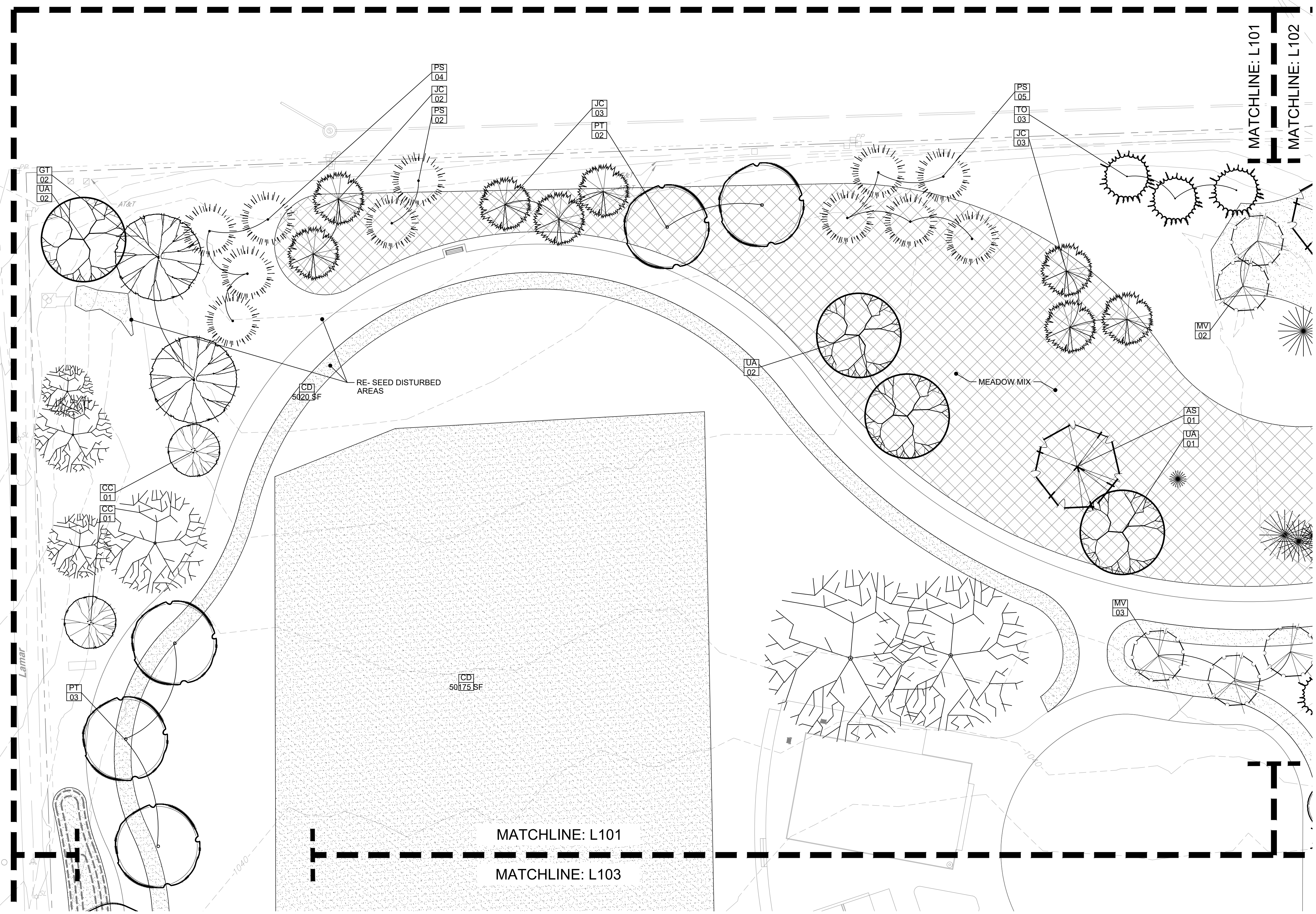
D

C
 THE SQUARES ABOVE ARE COLOR
 WITH PRINTING TO CORRECTLY
 IF PRINTED CORRECTLY

C

B

A



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PLANTING PLAN
 ENLARGEMENT

L101

02
 L101 PLANTING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS
 EITHER AN UNCORRECTED
 SHEET'S ORIGINAL LAYOUT SIZE

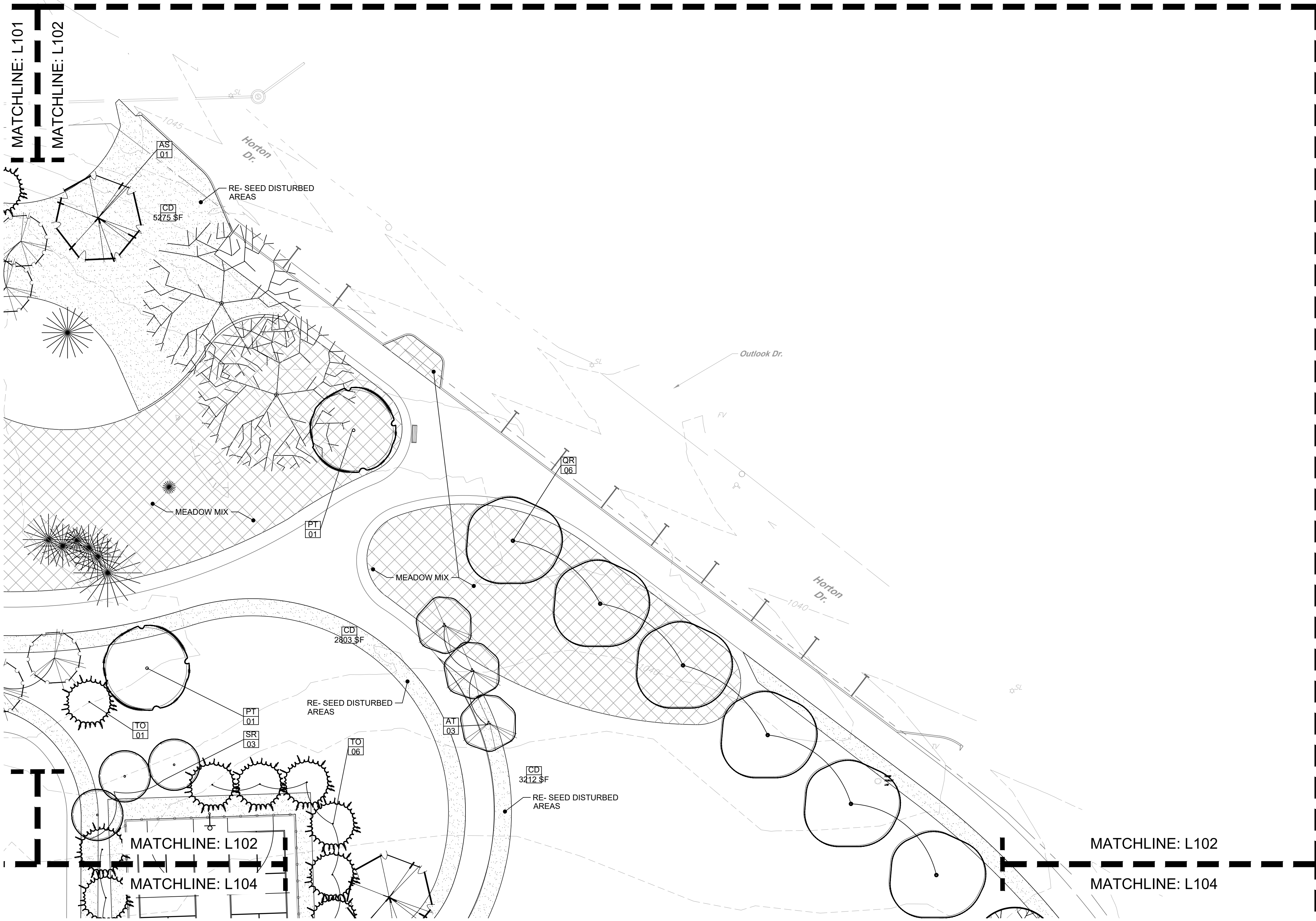
THE SQUARES ABOVE ARE COLOR
 WITH AN UNCORRECTED
 IF PRINTED CORRECTLY

D

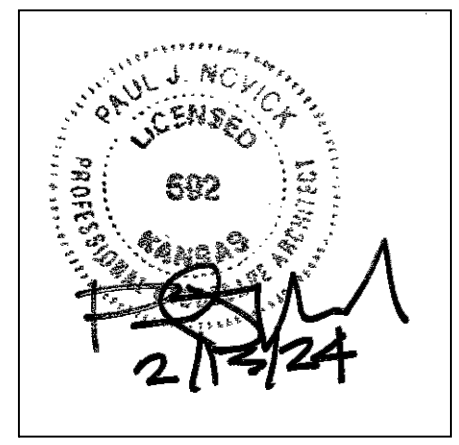
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03
 L102 PLANTING PLAN ENLARGEMENT



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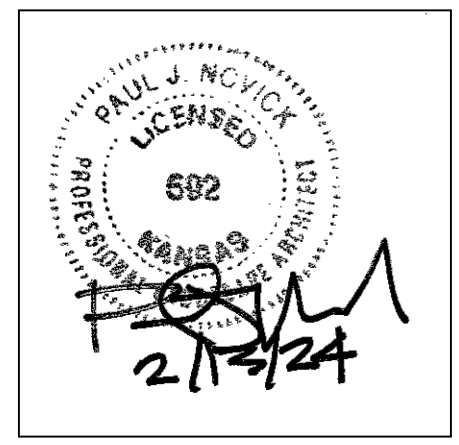
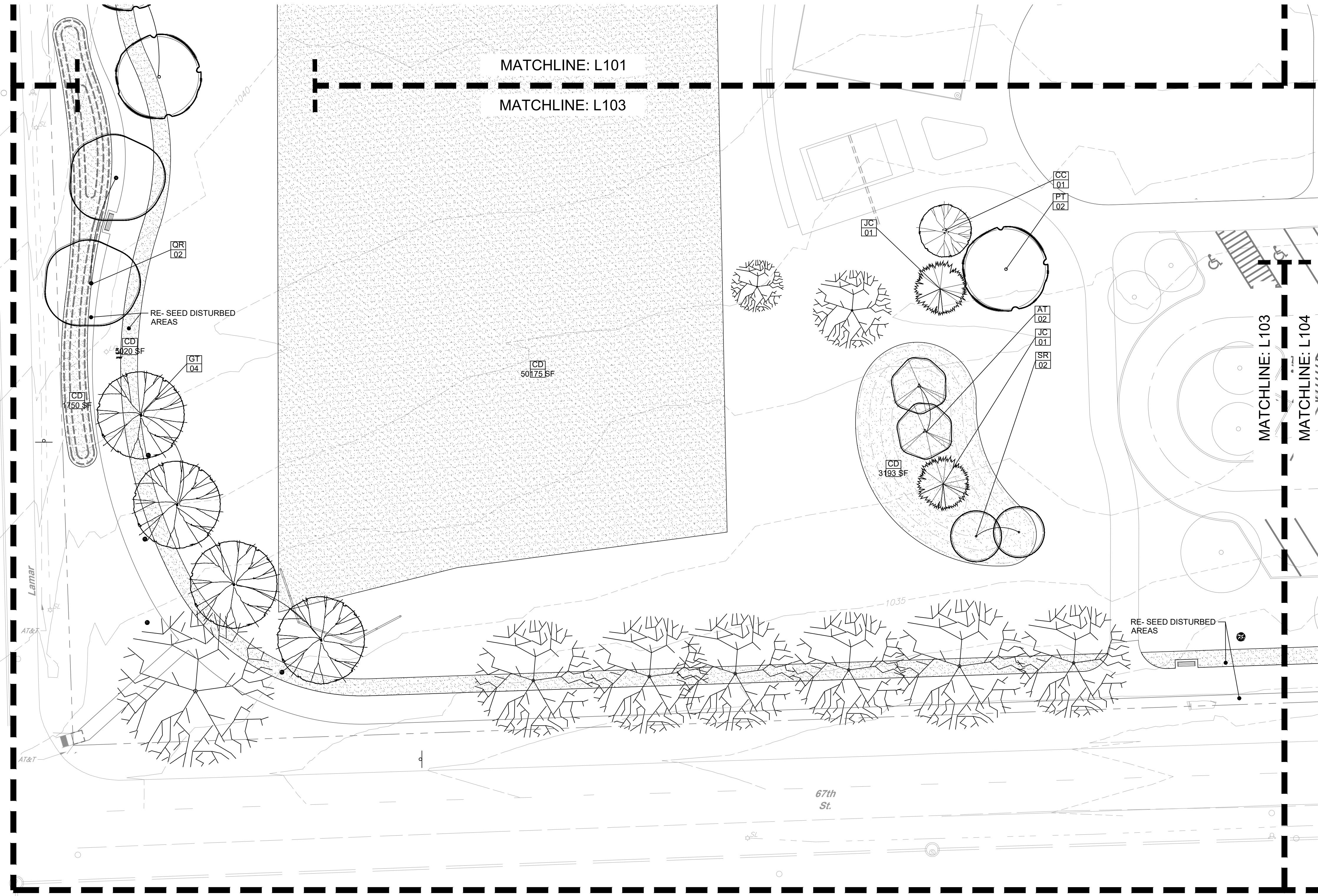
Project Number	23093
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Date	YYYY-MM-DD

PLANTING PLAN
 ENLARGEMENT

L102

THE LINE SHOWN ABOVE IS
 ENLARGED FOR CLARITY.
 IF PROVIDED CORRECTLY,
 THE SQUARES ABOVE ARE COLOR
 WITH THE CORRESPONDING
 C M Y K

D
C
B
A



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PLANTING PLAN
 ENLARGEMENT

L103

04
 L103 PLANTING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS
 ENLARGED FOR CLARITY. IT IS
 NOT TO SCALE.

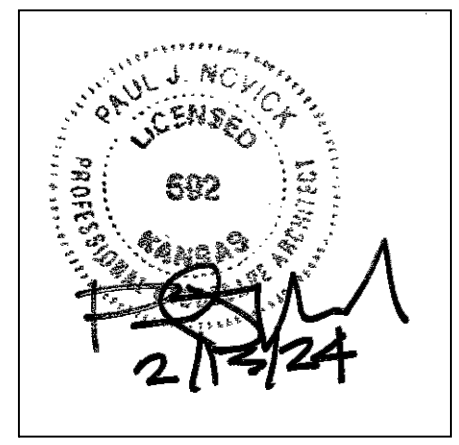
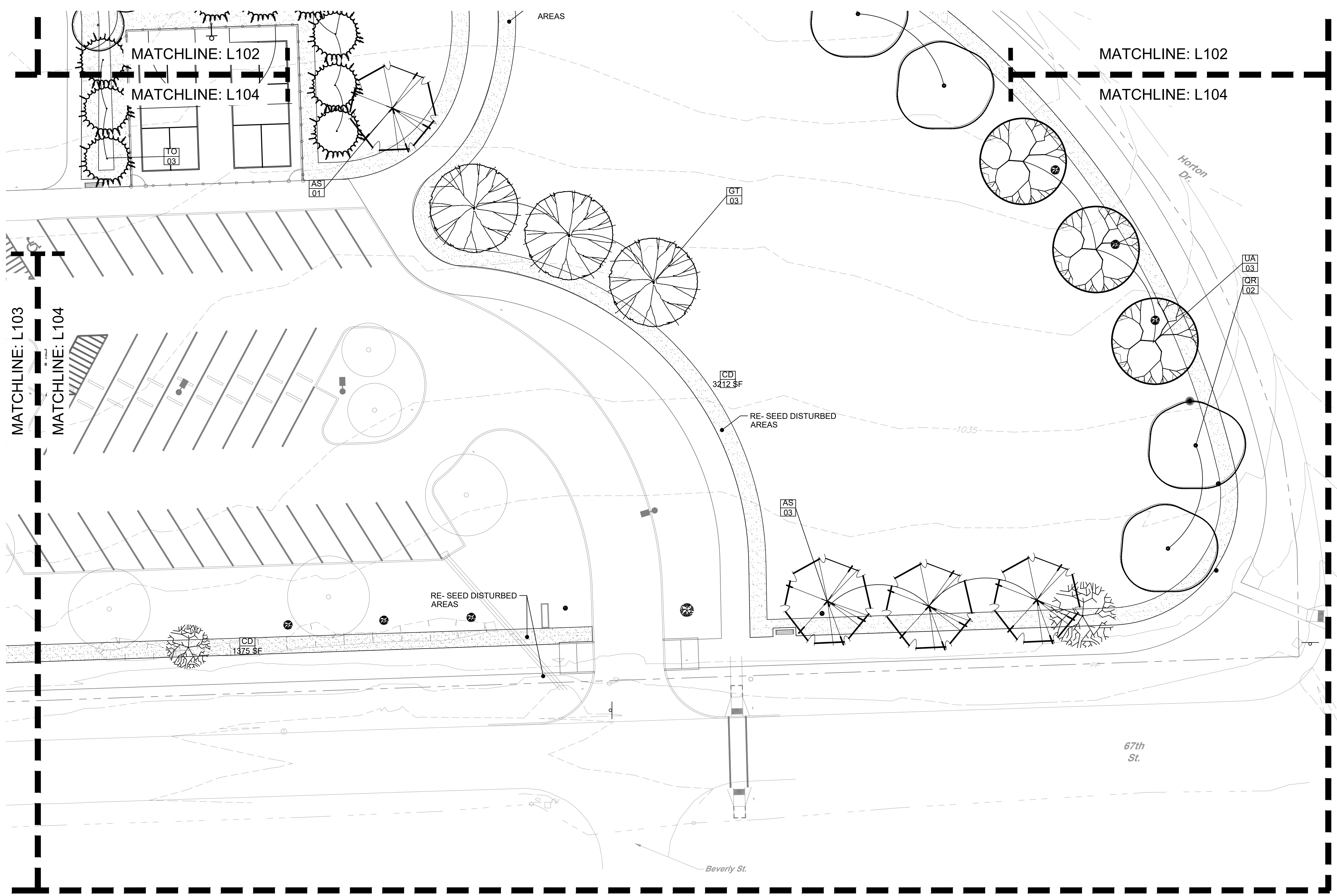
D

C
 THE SQUARES ABOVE ARE COLOR
 CODES FOR THE PLANTING
 SCHEDULE. IF PROVIDED, CORRECTLY.

C

B

A



Revision Schedule

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PLANTING PLAN
 ENLARGEMENT

L104

05
 L104 PLANTING PLAN ENLARGEMENT



1

2

3

4

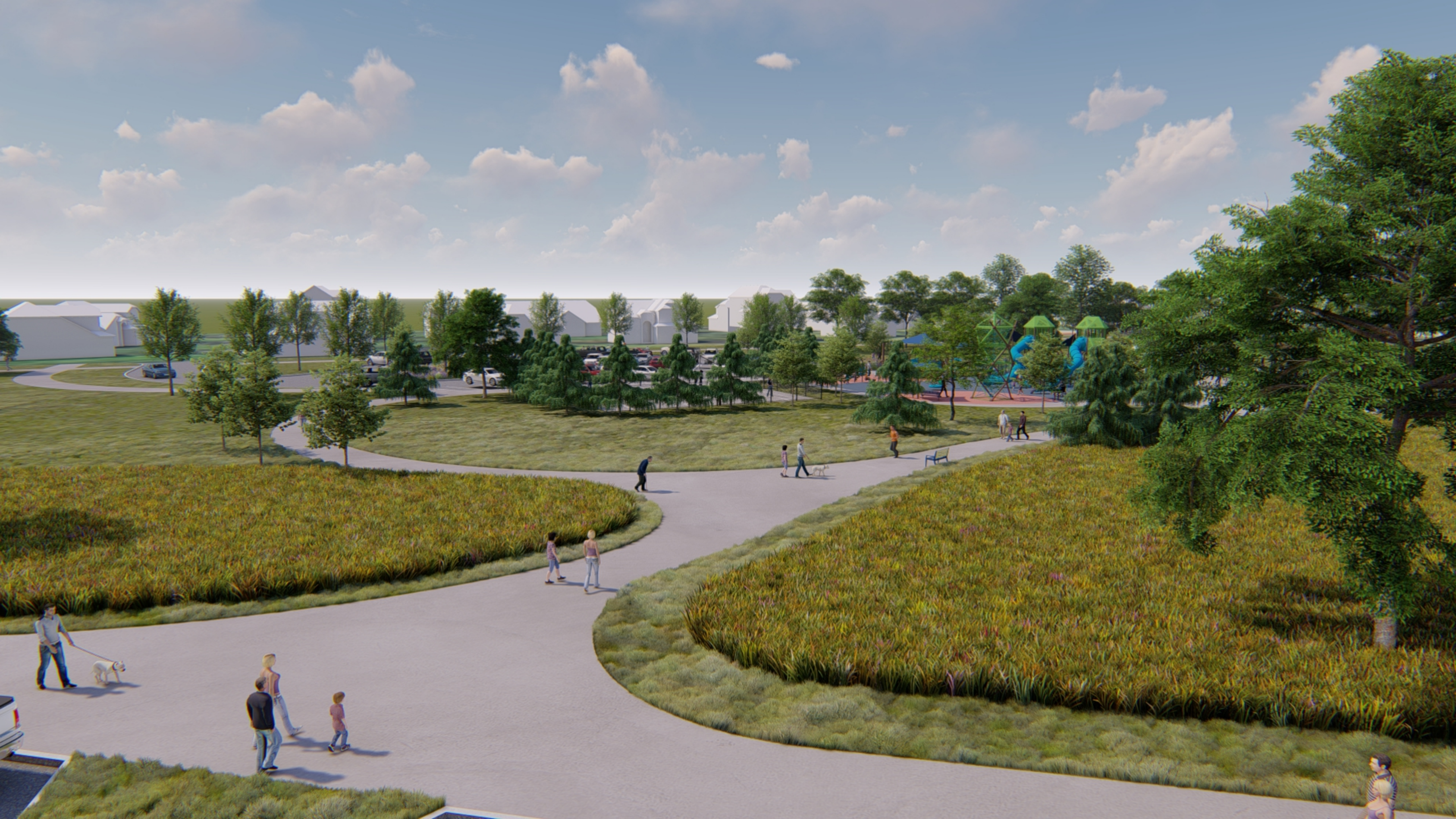




















TECHNICAL SPECIFICATIONS
FDP Submittal
February 13, 2024

Mohawk Park Phase 2
City of Mission, KS



SECTION 015639 - TREE PROTECTION AND TRIMMING

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes the protection and trimming of existing trees that interfere with, or are affected by, execution of the Work, whether temporary or permanent construction.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate installation with work of other trades and specifications.

1.03 SUBMITTALS

- A. See Section 01 3000 – Administrative Requirements for submittal procedures.
- B. Product Data: For each type of product indicated.
- C. Tree Pruning Schedule: Written schedule from arborist detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.
- D. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- E. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

1.04 QUALITY ASSURANCE

- A. Arborist Qualifications: An arborist certified by ISA or licensed in the jurisdiction where Project is located.
- B. Tree Pruning Standard: Comply with ANSI A300 (Part 1), "Tree, Shrub, and Other Woody Plant Maintenance--Standard Practices (Pruning)."

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Drainage Fill: Selected crushed stone, or crushed or uncrushed gravel, washed, ASTM D 448, Size 24, with 90 to 100 percent passing a 2-1/2-inch (63-mm) sieve and not more than 10 percent passing a 3/4-inch (19-mm) sieve.

- B. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of weeds, roots, and toxic and other nonsoil materials.
 - 1. Obtain topsoil only from well-drained sites where topsoil is 4 inches (100 mm) deep or more; do not obtain from bogs or marshes.
- C. Filter Fabric: Manufacturer's standard, nonwoven, pervious, geotextile fabric of polypropylene, nylon, or polyester fibers.
- D. Chain-Link Fence: Metallic-coated steel chain-link fence fabric of 0.120-inch- (3-mm-) diameter wire; a minimum of 72 inches high and maximum 96 inches high; with 1.9-inch- (48-mm-) diameter line posts; 2-3/8-inch- (60-mm-) diameter terminal and corner posts; 1-5/8-inch- (41-mm-) diameter top rail; and 0.177-inch- (4.5-mm-) diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
- E. Organic Mulch: Shredded hardwood, free from deleterious materials.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Temporary Fencing: Install temporary fencing around tree protection zones to protect remaining trees and vegetation from construction damage. Tree protection zone to extend to drip line of trees. Maintain temporary fence and remove when construction is complete.
- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- C. Mulch areas inside tree protection zones and within drip line of trees to remain and other areas indicated.
 - 1. Apply 3-inch (75-mm) average thickness of organic mulch. Do not place mulch within 6 inches (150 mm) of tree trunks.
- D. Do not store construction materials, debris, or excavated material inside tree protection zones. Do not permit vehicles or foot traffic within tree protection zones; prevent soil compaction over root systems.

3.02 EXCAVATION

- A. Install shoring or other protective support systems to minimize sloping or benching of excavations.
- B. Do not excavate within tree protection zones, unless otherwise indicated.
- C. Where utility trenches are required within tree protection zones, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand.

1. Root Pruning: Do not cut main lateral roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or chop.

3.03 REGRADING

- A. Grade Lowering: Where new finish grade is indicated below existing grade around trees, slope grade beyond tree protection zones. Maintain existing grades within tree protection zones.
- B. Minor Fill: Where existing grade is 6 inches (150 mm) or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.
- C. Moderate Fill: Where existing grade is more than 6 inches (150 mm) but less than 12 inches (300 mm) below elevation of finish grade, place drainage fill, filter fabric, and topsoil on existing grade as follows:
 1. Carefully place drainage fill against tree trunk approximately 2 inches (50 mm) above elevation of finish grade and extend not less than 18 inches (450 mm) from tree trunk on all sides. For balance of area within drip-line perimeter, place drainage fill up to 6 inches (150 mm) below elevation of grade.
 2. Place filter fabric with edges overlapping 6 inches (150 mm) minimum.
 3. Place fill layer of topsoil to finish grade. Do not compact drainage fill or topsoil. Hand grade to required finish elevations.

3.04 TREE PRUNING

- A. Prune trees to remain that are affected by temporary and permanent construction.
- B. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
- C. Pruning Standards: Prune trees according to ANSI A300 (Part 1).
 1. Type of Pruning: Cleaning.
- D. Cut branches with sharp pruning instruments; do not break or chop.
- E. Chip removed tree branches and dispose of off-site.

3.05 TREE REPAIR AND REPLACEMENT

- A. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.

3.06 DISPOSAL OF WASTE MATERIALS

- A. Burning is not permitted.
- B. Disposal: Remove excess excavated material and displaced trees from Owner's property.

END OF SECTION

SECTION 02 2700 - PROTECTION AND EROSION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Silt fences
- B. Inlet Filters

1.02 RELATED SECTIONS:

- A. Section 329119- Landscape Grading.

1.03 QUALITY ASSURANCE

- A. Perform work in accordance with Kansas Department of Transportation standards.

1.04 SUBMITTALS FOR REVIEW

- A. Submittals: Procedures for submittals and SWPPP Plan
- B. Product Data: Provide data for silt fence fabric and posts.
- C. Manufacturer's Installation Instructions: Indicate special procedures, positioning of posts, attachment, and perimeter conditions requiring special attention.

PART 2 - PRODUCTS

2.01 SILT FENCE MATERIALS

- A. Manufacturers:
 - 1. Reference Manufacturer: Mercantile Development, Inc. - Product: Geofab Silt Fence.
 - 2. Other acceptable Manufacturers:
 - a. Amoco Construction Fabrics.
 - 3. Section 01600 - Materials and Equipment: Product options and substitutions. Substitutions: Permitted.
- B. Silt Fence Fabric: 100 percent spunbound nylon reinforced with polyester netting, 4.2 ounces per square yard minimum, 36 inches minimum width; equip with enclosed attachment and support cord.
- C. Posts: Steel, 'T' section, 1.3 pounds per foot; equip with anchor plate.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of existing conditions before starting work.
- B. Verify that subgrade is ready to receive the work of this section.

3.02 PREPARATION

- A. Trench along silt fence line to required elevations.

- B. Remove large stones or other hard matter which could damage silt fence or impede consistent backfilling or compaction.

3.03 INSTALLATION - SILT FENCES

- A. Install silt fence and posts in accordance with fence manufacturer's instructions.
- B. Space posts 8 feet apart to height of 24 inches above subgrade.
- C. Secure fabric to posts, drape bottom of fabric into trench, backfill trench.

3.04 CLEANING

- A. Remove accumulated sediment and repair silt fence periodically.
- B. Remove silt fence, posts, and accumulated sediment prior to landscape grading.

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.
- B. Abandonment in place of existing utilities and utility structures.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Sequencing and staging requirements.
- C. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- D. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- E. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Site Plan: Showing:
 - 1. Vegetation to be protected.
 - 2. Areas for temporary construction and field offices.
 - 3. Areas for temporary and permanent placement of removed materials.
- C. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
 - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences.
 - 2. Identify demolition firm and submit qualifications.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SCOPE

- A. Remove portions of existing buildings as required to maintain facility operations. Contractor shall determine appropriate scheduling and coordinate with Owner with minimum 14 days in advance of demolition activities.
- B. Remove paving and curbs as required to accomplish new work.
- C. Within area of new construction, remove foundation walls and footings to a minimum of 2 feet (600 mm) below finished grade.
- D. Remove concrete slabs on grade as needed to achieve new work or as indicated on drawings.
- E. Remove other items indicated, for salvage, relocation, and recycling.
- F. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as required so that required rough grade elevations do not subside within one year after completion.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with other requirements specified in Section 01 7000.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Use of explosives is not permitted.
 - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 4. Provide, erect, and maintain temporary barriers and security devices.
 - 5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 7. Do not close or obstruct roadways or sidewalks without permit.
 - 8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. Do not begin removal until vegetation to be relocated has been removed and specified measures have been taken to protect vegetation to remain.
- F. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- G. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- H. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- I. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - 1. Dismantle existing construction and separate materials.
 - 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.
- J. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

3.03 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. Verify that abandoned services serve only abandoned facilities before removal.
 - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.

3.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

**SECTION 31 0000
EARTHWORK**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including Bidding Requirements, General and Supplementary Conditions and Division 01 Specification Sections, apply to work specified in this Section.
- B. APWA 2100 Grading and Site Preparation
- C. APWA 2400 Seeding, Sodding and Overseeding

1.02 SUMMARY

- A. This Section includes all labor, materials, equipment and supervision required to furnish and install the following:
 - 1. Protecting existing vegetation to remain
 - 2. Removing existing vegetation
 - 3. Clearing and grubbing
 - 4. Stripping and stockpiling topsoil
 - 5. Stripping and stockpiling rock
 - 6. Removing above- and below-grade site improvements
 - 7. Temporary erosion control

1.03 CODES, PERMITS AND FEES

- A. Obtain any necessary permits for this Section of Work and pay any fees required for permits.
- B. The entire installation shall fully comply with all local and state laws and ordinances, and with all established codes applicable thereto.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials and place in designated area with adequate protection.

1.05 COORDINATION

- A. Coordinate installation of required devices and other structural components as they are constructed.
- B. Coordinate installation of identifying devices after completing covering and painting if devices are applied to surfaces.

1.06 JOB CONDITIONS

- A. Existing Utilities:
 - 1. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during this work.
 - 2. Underground utilities shown on the drawings have been taken from existing public records, Owner's records available drawings and are correct to the best of our knowledge, provided for information only.
 - 3. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult Utility Owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities caused by Contractor's negligence to the satisfaction of Utility Owner at no cost to the Project Owner.

4. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, during occupied hours, except when permitted in writing by Landscape Architect and then only after acceptable temporary utility services have been provided.
 5. Provide minimum of 48-hour notice to Owner and Landscape Architect and receive written notice to proceed before interrupting any utility.
- B. Protection of Persons and Property:
PRODUCT DATA SHEET 1 -
1. Barricade open excavations occurring as part of this work and post with warning lights.
 2. Operate warning lights as recommended by authorities having jurisdiction.
 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by this work.

1.09 INSPECTION AND APPROVAL

- A. All materials described and specified herein are subject to inspection and approval by Owner's Representative.
- B. Materials may be inspected by the Owner's Representative at source of supply or the Owner's Representative may require the Contractor to submit color photographs which illustrate the specified plant material at the source of supply.
- C. This inspection does not waive the right to reject any material after it has been delivered to the site and/or installed.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Only soil approved by the County of Johnson County, respective APWA Sections will be allowed.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been flagged and that protected zones have been identified and enclosed.
- C. Protecting existing site improvements to remain from damage during construction.
- D. Restore damaged improvements to their original conditions, as accepted to the Owner.

3.02 TEMPORARY EROSION AND SEDIMENT CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.03 TREE AND PLANT PROTECTION

- A. Protect trees and plants remaining on-site according to drawings.
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations according to drawings.

3.04 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or be relocated.
 - 2. Grind down stumps and remove roots larger than 2 inches (50 mm) in diameter, obstructions, and debris to a depth of 48 inches (1,200 mm) below exposed subgrade.
 - 3. Use only hand methods or air spade for grubbing within protection zones.
 - 4. Chip removed tree branches and stockpile in areas approved by Architect.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.05 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to depth of 6 inches (150 mm) in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and non-soil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
 - 1. Limit height of topsoil stockpiles to 96 inches (2400 mm).
 - 2. Do not stockpile topsoil within protection zones.
 - 3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
 - 4. Stockpile surplus topsoil to allow for re-spreading deeper topsoil.

3.06 STOCKPILING ROCK

- A. Remove from construction area naturally formed rocks that measure more than 1 foot (300 mm) across in least dimension. Do not include excavated or crushed rock.
 - 1. Separate or wash off non-rock materials from rocks, including soil, clay lumps, gravel, and other objects larger than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.
- B. Stockpile rock away from edge of excavations without intermixing with other materials. Cover to prevent windblown debris from accumulating among rocks.
 - 1. Limit height of rock stockpiles to 36 inches (900 mm).
 - 2. Do not stockpile rock within protection zones.
 - 3. Dispose of surplus rock. Surplus rock is that which exceeds quantity indicated to be stockpiled or reused.

3.07 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.08 DISPOSAL OF SURPLUS AND WASTE MATERIAL

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Burning tree, shrub, and other vegetation waste is permitted according to burning requirements and permitting of authorities having jurisdiction. Control such burning to produce the least smoke or air pollutants and minimum annoyance to surrounding properties. Burning of other waste and debris is prohibited.
- C. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials, and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION

SECTION 321313 - CAST-IN-PLACE CONCRETE

PART 1- GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including Bidding Requirements, General and Supplementary Conditions and Division I Specification Sections, apply to work specified in this Section.
- B. Comply with ACI 301-8 and 318-83 for all work.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate installation with work of other trades.

1.03 WORK INCLUDED

- A. Provide all labor, materials, equipment and supervision required to construct concrete steps, walls, and bollards, etc., including:
 - 1. Concrete.
 - 2. Curing Compounds.
 - 3. Expansion and contraction joints and fillers.
 - 4. Sleeves.

1.04 QUALITY ASSURANCE

- A. Owner to provide all testing of on-site concrete. Lab reports shall be simultaneously forwarded to the Owner, Contractor, Architect and Landscape Architect.
- B. Testing:
 - 1. Slump to be checked in accordance with ASTM C143. One test minimum per day.
 - 2. Air content measured in accordance with ASTM C231, or C173. One test minimum daily.
 - 3. Strength tests:
 - a. Take one (1) cylinder for each fifty (50) cubic yards or part thereof. Minimum one set of One (1) cylinder per each day's pour.
 - b. Each cylinder shall be plainly marked showing cylinder designation (1A, 1B, 1C, etc.).
 - c. Job cure each cylinder three (3) days.
 - d. After three (3) days, Owner will test at ages seven (7) days and set of two at twenty-eight (28) days. Additional Cylinders to remain at the job as a "spare" cured under same conditions as concrete in the area from which it was taken.
 - e. The date and location of each sample shall be marked on the Contractor's job set of plans.
 - f. Load and core tests shall be required only if cylinder tests indicate concrete does not meet Specifications. Such tests, if deemed advisable by the Landscape Architect, shall be arranged and paid for by the Contractor.

1.05 SUBMITTALS

- A. Certification of concrete design mix by a testing laboratory. Submit prior to placement.
- B. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- C. Joint Sealer color samples for approval
- D. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer detailing fabrication, assembly, and support of formwork.
 - 1. Shoring and Reshoring: Indicate proposed schedule and sequence of stripping formwork, shoring removal, and installing and removing reshoring.

1.06 CODES, PERMITS AND FEES

- A. Obtain any necessary permits for this Section of Work.

- B. The entire installation shall fully comply with all state laws and ordinances, and with all established codes applicable thereto.

1.07 SITE DISTURBANCES

- A. Take precautions to ensure that equipment and vehicles do not disturb or damage existing site grading, walks, drives, utilities, plants, etc.
- B. Verify locations and depths of all underground utilities prior to excavation.
- C. Protect adjacent work. Repair and/or return to original condition any damage caused by Contractor's negligence at no cost to Owner.
- D. Provide temporary barricades and warning lights as required for protection of project work and public safety.

PART 2 - PRODUCTS

2.01 PORTLAND CEMENT

- A. ASTM C150, type 1 or type 111.

2.02 SAND

- A. Clean, hard, washed and well graded. Sand shall conform with ASTM C33. Provide tests providing compliance with this Section.

2.03 COARSE AGGREGATE

- A. Aggregate shall conform to ASTM C33. Aggregate for footings and other unexposed concrete may be gravel. Aggregate for exterior concrete and surfaces shall be KCMMB aggregate, max. size 1". No substitutions will be allowed. Evidence of staining due to impurities will be cause for rejection of work.
- B. Class: Severe weathering region, but not less than 3S

2.04 MIXING WATER

- A. Clean and free from oil, acid and injurious amounts of vegetable matter, alkalies and other impurities. Complying with ASTM C 94.

2.05 ADMIXTURES

- A. Air-entraining agents shall conform to ASTM C260. Calcium Chloride is not to be used. No other admixtures shall be used without the expressed, written consent of the Landscape Architect. A water reducing agent may be used as deemed necessary, to be in conformance with the latest ASTM requirements. A maximum of 15% replacement of cement with fly ash will be permitted.

2.06 CURE AND SEAL

- A. CS-309 W.R. Meadows, Inc. or equivalent.

PART 3- EXECUTION

3.01 SUBGRADE PREPARATION

- A. Excavate, fill, compact, grade and prepare subgrade as specified in Earthwork and Site Grading: Section 31 2200.

3.02 FORMS

- A. Use wood or steel forms adequately staked and braced for all exposed slab edges. Construct curve forms with flexible material, adequately braced to provide a smooth continuous curved walk or wall surfaces.
- B. Secure forms in place to maintain grade and alignment while concrete is placed and finished.
- C. Set base of form at subgrade elevation or below with top of form at pavement surface elevation at edge of slab; set forms on properly compacted materials.
- D. Oil forms before concrete is placed.

- E. Leave forms in place not less than eight (8) hours after concrete is placed. If removal causes damage to concrete, leave forms on as long as necessary to prevent damage.
- F. Remove forms with care to prevent cracking, spalling or overstressing concrete.

3.03 CONCRETE MIX

- A. Concrete mix for concrete steps and walls:
 - 1. KCM MB 4K - Minimum of 4,000 psi compressive strength at twenty-eight (28) days.
 - 2. Maximum of five (5) gallons of water per sack of cement (including free moisture in aggregate).
 - 3. Minimum of six (6) sacks of cement per cubic yard.
 - 4. Slump four inch (4") maximum.
 - 5. Air content 5% - 7%.

3.4 MIXING

- A. Except as otherwise specified, concrete shall be ready-mixed or job-mixed at the Contractor's option, and in accordance with requirements of ACI 318-77. Ready-mixed concrete shall be mixed and delivered to the project in accordance with ASTM C94. Maximum mixing time is one (1) hour.

3.5 JOINTS

- A. Construction Joint - Keyed joints or doweled joints shall be used at ends of all concrete pours. Bars to extend through joints a minimum of twenty-four (24) bar diameters.
- B. Tooled expansion joints at exterior concrete slabs shall be installed as shown on the plans.
- C. Expansion joints to be placed at all turns horizontally or changes vertically and for every 30'.
- D. Tooled contraction joints shall be and one-half (1/2) inch maximum wide and two (2) inches of slab thickness in depth with one-quarter (1/4) inch radius edge.
- E. Sidewalk construction joints shall be spaced as shown on Plans.

3.6 PLACING AND PROTECTING CONCRETE

- A. No concrete shall be placed until Landscape Architect has inspected and approved forms, placement of reinforcement, pipes, sleeves, conduit and other inserts.
- B. Before placing concrete, remove all debris, water and ice from the place to be occupied by the concrete. Wet subgrade and forms immediately prior to placing concrete.
- C. Concrete shall be deposited in the forms as nearly as possible to final location. The placing or depositing of all concrete shall be done in accordance with requirements of the ACI 318-77. Brush on neat grout where placing against hardened concrete.
- D. Erect windbreaks to prevent strong, hot winds from drying exposed slabs while they are being finished. Keep concrete moist.
- E. Use of salt or other chemicals is prohibited. Use of accelerating admixtures will not be permitted.
- F. Cold weather concreting shall be done only if Contractor can maintain temperatures of seventy (70) degrees F. or above for three (3) days or fifty (50) degrees F. or above for five (5) days. Do not allow concrete to freeze for next four (4) days. Keep concrete moist. Place no concrete for foundations on backfilled earth, disturbed or frozen earth. During cold weather concreting, prevent freezing of soil beneath footing. All compacted fill to receive concrete floors shall be brought to a temperature of fifty (50) degrees before concrete floor is placed and shall be maintained at this temperature until concrete has taken its final set.
- G. Place concrete continuously between construction joints. Deposit in horizontal layers not greater than 24". Consolidate layers while still plastic to prevent cold joints.
- H. Place all footings full thickness in one operation, without changing in proportions; screeded to proper elevation; and floated.
- I. Consolidate installed concrete using mechanical vibrating equipment supplemented with hand rodding and tamping. Work concrete thoroughly around reinforcement and other embedded items and into all parts of formwork.

3.7 FINISHING

- A. Walls

1. Remove bulges, fins, form marks and roughness from exposed surfaces by grinding.
2. Fill honeycombed and other defective area by cutting out to solid concrete (minimum depth = 1") with straight edges and at right angles to the surface. Dampen area to be patched, brush on grout of equivalent parts Portland Cement and sand and follow immediately with patching mortar.
3. Patching mortar to be not richer than one (1) part Portland Cement to three (3) parts sand. Color of patching mortar shall match the adjacent concrete. (Substitute white Portland Cement for part of the grey cement as needed to provide color match).
4. Trowel or burlap rub patched areas to match the surrounding concrete area. Clean all walls upon completion.
5. Exposed concrete wall faces to have a uniform board form concrete finish.
6. Acceptance: The presence of serious honeycomb or excessive misalignment of forms shall be sufficient cause of rejection and replacement of the concrete affected at the Contractor's expense.

3.8 CONCRETE CURING

- A. All concrete shall be kept continuously moist for at least five (5) days after placement. If forms are removed prior to five days, apply liquid membrane-forming curing compound complying with ASTM C309.
- B. Formed concrete shall be cured in the forms with the exposed surfaces covered by burlap or polyethylene. Stripping of wall and non-structural forms prior to the end of the curing period will not be permitted, unless provisions are made to keep the concrete covered and sealed tight.

3.9 APPLICATION OF SEALER (ALL EXPOSED CONCRETE SLABS)

- A. Apply one coat as a cure as soon after final troweling as possible. Coverage and application in accordance with manufacturer's recommendations.

3.10 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from concrete operations.

END OF SECTION 321313

SECTION 32 9000
EXTERIOR PLANTINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including Bidding Requirements, General and Supplementary Conditions and Division 1 Specification Sections, apply to work specified in this Section.

1.02 SUMMARY

- A. This Section includes all labor, materials, equipment and supervision required to furnish and install the following:
1. Trees
 2. Shrubs.
 3. Ground cover.
 4. Perennials and Grasses.

1.03 WORK SPECIFIED ELSEWHERE

- A. Section 31 1000 – ‘Clearing and Site Preparation’ for site clearing and earth moving.

1.04 DEFINITIONS

- A. Balled and Burlapped Stock: Exterior plants dug with firm, natural balls of earth in which they are grown, with ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of tree or shrub required; wrapped, tied, and rigidly supported, as recommended by ANSI Z60.1. Designated as “B&B”.
1. Balls: Firmly wrapped with burlap or similar biodegradable material and bound with twine, cord or wire mesh.
 2. Broken or loose balls will not be accepted.
- B. Balled and Potted Stock: Exterior plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of exterior plant required per Plant Schedule.
- C. Bare-Root Stock: Exterior plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for kind and size of exterior plant required per Plant Schedule.
- D. Container-Grown Stock: Healthy, vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for kind, type, and size of exterior plant required per Plant Schedule.
- E. Finish Grade: Elevation of finished surface of planting soil.
- F. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- G. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- H. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.
- I. Plant Schedule: A list of plant materials is scheduled on the Drawing. In the event of any discrepancy between this schedule and the Plan Drawing showing the plants, the Plan Drawing shall govern.

- J. PLANET Certification: The Professional Landcare Network (PLANET) is an international association serving lawn care professionals, landscape management, design/build/installation professionals, irrigation & water management and interior plantscapers. The International Certification Council (ICC) is the group that seeks to make that vision a reality by establishing certification programs, administering exams, and enforcing ethical compliance of all certification programs on behalf of PLANET. For more information, visit <http://www.landcarenetwork.org>.
- 1.05 SUBMITTALS
- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each of the following:
1. 1 quart for each color and texture of wood mulch required, in labeled plastic bags.
- C. Product Certificates: For each type of manufactured product, signed by product manufacturer, and complying with the following:
1. Manufacturer's certified analysis for standard products.
 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- D. Qualification Data: For landscape Installer. Submit all applicable corporate certificates and certifications for all technicians and jobsite supervisors.
1. Proof of Contractor PLANET Certification.
 - a. Proof of certification shall be submitted to Landscape Architect within 21 days following the award of Contract and should be maintained on jobsite at all times.
- E. Material Test Reports: For existing surface soil and imported topsoil.
- F. Planting Schedule: Indicating anticipated planting dates for exterior plants.
- G. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of exterior plants during a calendar year. Submit before expiration of required maintenance periods.
- 1.06 QUALITY ASSURANCE
- A. Installer Qualifications: A qualified PLANET Landscape Industry Certified Technician (www.landcarenetwork.org) with a minimum of five (5) years experience similar in material, design and extent to that indicated for this project and whose work has resulted in successful establishment of exterior plants.
1. Installer's Field Supervision: Require Installer to maintain an experienced full-time PLANET Landscape Industry Certified supervisor on Project site when exterior planting is in progress.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
1. Report suitability of topsoil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil.
- D. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock." In the event there is a discrepancy between these standards and this Specification, the most restrictive requirement shall govern.
- E. Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.
1. Equal or exceed measurements specified in Plant Schedule.

1.07 CODES, PERMITS AND FEES

- A. Obtain any necessary permits for this Section of Work and pay any fees required for permits.
- B. The entire installation shall fully comply with all local and state laws and ordinances, and with all established codes applicable thereto.

1.08 JOB CONDITIONS

- A. Existing Utilities:
 - 1. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during this work.
 - 2. Underground utilities shown on the drawings have been taken from existing public records, Owner's records available drawings and are correct to the best of our knowledge, provided for information only.
 - 3. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult Utility Owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities caused by Contractor's negligence to the satisfaction of Utility Owner at no cost to the Project Owner.
 - 4. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, during occupied hours, except when permitted in writing by Landscape Architect and then only after acceptable temporary utility services have been provided.
 - 5. Provide minimum of 48-hour notice to Owner and Landscape Architect and receive written notice to proceed before interrupting any utility.
- B. Protection of Persons and Property:
 - 1. Barricade open excavations occurring as part of this work and post with warning lights.
 - 2. Operate warning lights as recommended by authorities having jurisdiction.
 - 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by this work.

1.09 INSPECTION AND APPROVAL

- A. All materials described and specified herein are subject to inspection and approval by Owner's Representative.
- B. Materials may be inspected by the Owner's Representative at source of supply or the Owner's Representative may require the Contractor to submit color photographs which illustrate the specified plant material at the source of supply.
- C. This inspection does not waive the right to reject any material after it has been delivered to the site and/or installed.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver exterior plants freshly dug.
 - 1. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
- B. Do not prune trees and shrubs before delivery, except as approved by Landscape Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.
- C. Lift and handle plants from the bottom of the root ball only.
- D. Plants moved with a ball will not be accepted if root ball is cracked, loose or broken before or during planting operations.
- E. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.
 - 1. Heel-in bare-root stock. Soak roots in water for two hours if dried out.
 - 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 - 3. Do not remove container-grown stock from containers before time of planting.

4. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

F. Deliver fertilizer to site in original, unopened containers, each bearing manufacturer's guaranteed analysis.

G. Store packaged materials off the ground and protect from moisture.

1.11 COORDINATION

A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Deciduous trees and shrubs: April 1 to June 1 and August 15 to November 15.

2. Evergreen trees and shrubs: April 1 to June 1 and August 15 to October 15

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

C. Coordination with Lawns: Plant trees and shrubs after finish grades are established and before planting lawns, unless otherwise acceptable to Landscape Architect.

1. When planting trees and shrubs after lawns, protect lawn areas and promptly repair damage caused by planting operations.

1.12 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to and run concurrent with, other warranties made by the contractor under requirements of the Contract Documents.

B. Special Warranty: Warrant living trees and shrubs for a period of one (1) year after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents which are beyond Contractor's control.

C. Plants shall be alive and in good, healthy and flourishing condition of growth at the end of the warranty period.

D. At the end of the guaranty period, final inspection will be made by owner's Representative upon written notice requesting such inspection; submit notice to Owner's Representative at least ten (10) days before the anticipated date of inspection.

E. Any plant, required under this Contract, that is dead or not in a vigorous, thriving condition, as determined by Owner's Representative at the time of Final Inspection, will be removed from the site.

F. Plants that are missing at the time of Final Inspection are to be installed during the specified planting season when weather and site conditions permit.

G. In case of any questions regarding the condition and satisfactory establishment of a rejected plant, the Landscape Contractor may elect to allow such plant to remain through another complete growing season. If at that time the rejected plant is found to be dead, in an unhealthy or badly impaired condition, it shall be replaced.

H. After Substantial Completion, replace plants (once during or at the end of the guaranty period) that are observed to be dead or in a badly impaired condition.

I. One replacement after Substantial Completion shall constitute fulfillment of Contractor's warranty for the particular plant replaced.

J. Replacement Plants: Plants of the same kind and size as specified in the Plant Schedule; furnished and planted as specified herein.

K. Replacement Plants: Guyed or staked, mulched, wrapped, fertilized, pruned and restored to original condition as originally specified at no cost to Owner.

L. Make all necessary repairs to grades, lawns and paving required because of plant replacements, at no cost to the Owner.

- M. Plant Replacement Cost: Borne by Contractor except for possible replacements resulting from removal, loss or damage due to occupancy of project in any part, vandalism, civil disobedience, or acts of neglect on the part of others, physical damage by animals, vehicles, fire, etc., or losses due to curtailment of water by local authority, or to "Acts of God". Floods, tornadoes, wind of hurricane force, and hail are not normal and the damage they do cannot be calculated in a bid.
- 1.13 MAINTENANCE
- A. Begin immediately following installation of plants and continue until Substantial Completion.
- B. Include watering, weeding, cultivating, mulching, removal of dead material, resetting plants to proper grades or upright position and restoration of the planting saucer, and other necessary operations.
- C. If any planting is done after lawn preparation, provide proper protection to lawn areas and repair any damage resulting from planting operation promptly at no cost to the Owner.
- D. Maintenance after Final Acceptance of the planting will be performed by the Owner.
- E. Furnish detailed written recommended maintenance program to the Owner with a copy to Landscape Architect, prior to Substantial Completion of the various planting areas.
- F. Maintenance performed by the Owner in accordance with recommended program will not affect the Landscape Contractor's obligation to guarantee and replace defective plants as herein described.

PART 2 - PRODUCTS

2.01 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.
- C. Certification of inspection of plant materials required by Federal, State or other governmental agencies to accompany all shipments to be furnished to the Owner's Representative.
- D. Nomenclature: The names of plants required under this Contract conform to those given in the "Standardized Plant Names", 1942 Edition, prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery trade.
- E. Species and Variety: True to name as specified. Plants approved as true to name at time of initial acceptance which, during the warranty period, exhibit characteristics indicating they are not true to name will be replaced at no cost to the Owner.
- F. Availability: Before submitting his bid, the Contractor shall have investigated the sources of supply and satisfied himself that he can supply the listed plants in the size, variety and quality listed and specified. Failure to take this precaution will not relieve the Contractor from his responsibility for furnishing and installing all plant materials in strict accordance with the Contract Documents without additional cost to the Owner.
- G. Quality:
1. Growth habit typical for species and as indicated on the Plant Schedule.
 2. Sound, healthy, vigorous and free from insect pests, plant diseases and injuries.
 3. One sided plants or plants taken from tightly planted nursery rows will be rejected.
- H. Size and Form:
1. Equal or exceed measurements specified in the Plant Schedule.
 2. Measured before pruning with branches in normal position. Height and spread specified refers to main body of plant and not from tip to tip of branches or roots.

3. Caliper of trees four inches (4") and less- taken six inches (6") above ground level. Trees over four inches (4") - measured one foot (12") above ground level.
4. Specified trunk height can be obtained by pruning lower branches of a plant after the plant has been installed; however, pruning to achieve specified trunk height is to occur after owner's Representative has inspected plant and directed Contractor as to the amount of pruning required.
5. Where specified by caliper, no one stem of a specific multi-stemmed plant shall be smaller than the caliper size specified.

- I. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.
- J. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- K. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.

2.02 OVERSTORY TREES

- A. Overstory Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required by Plant Schedule.
 1. Provide balled and burlapped trees.
- B. Root-Ball Depth: Furnish trees with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.03 UNDERSTORY TREES

- A. Understory Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required by Plant Schedule.
 1. Provide balled and burlapped trees.
- B. Root-Ball Depth: Furnish trees with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.04 DECIDUOUS SHRUBS

- A. Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub required by Plant Schedule.
- B. Root-Ball Depth: Furnish shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.05 GROUND COVER PLANTS

- A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1 and the Plant Schedule.

2.06 PLANTS

- A. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed.
- B. Grasses: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed.

2.07 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 6 to 7, a minimum of 4 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 1. Topsoil Source: Reuse surface soil stockpiled on-site. Independent soil testing is required to verify suitability of stockpiled surface soil to produce topsoil. Amend soil as recommended by soil testing agency to meet organic content and pH requirements. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

- a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.
2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.
3. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.

2.08 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
 1. Class: Class T, with a minimum 99 percent passing through No. 8 (2.36-mm) sieve and a minimum 75 percent passing through No. 60 (0.25-mm) sieve.
 2. Class: Class O, with a minimum 95 percent passing through No. 8 (2.36-mm) sieve and a minimum 55 percent passing through No. 60 (0.25-mm) sieve.
 3. Provide lime in form of dolomitic limestone.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 (3.35-mm) sieve and a maximum 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- G. Sand: Clean, washed, natural or manufactured, free of toxic materials.
- H. Diatomaceous Earth: Calcined, diatomaceous earth, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
- I. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

2.09 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 1. Organic Matter Content: 50 to 60 percent of dry weight.
 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
- C. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
- D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 lb (2.4 kg) of ammonium nitrate or 0.25 lb (4 kg) of ammonium sulfate per cubic foot (cubic meter) of loose sawdust or ground bark.

- E. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- 2.10 FERTILIZER
- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 20 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
1. Composition: 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- 2.11 MULCHES
- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
1. Type: Shredded hardwood
 2. Sive range: 3 inches maximum, ½ inch minimum
 3. Color: Natural
 4. Walnut products are prohibited.
 5. Depth and locations as shown on drawings.
 6. Furnish in bags or bulk.
 7. Submit sample for approval by Landscape Architect.
- 2.12 TREE STABILIZATION MATERIALS
- A. Stakes and Guys
1. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal (38-by-38-mm actual) by length indicated, pointed at one end.
 2. Wood Deadmen: Timbers measuring 8 inches (200 mm) in diameter and 48 inches (1200 mm) long, treated with specified wood pressure-preservative treatment.
 3. Flexible Ties: Wide rubber or elastic bands or straps of length required to reach stakes or turnbuckles.
 4. Guys and Tie Wires: ASTM A 641/A 641M, Class 1, galvanized-steel wire, two-strand, twisted, 0.106 inch (2.7 mm) in diameter.
 5. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
 6. Guy Cables: Five-strand, 3/16-inch- (4.8-mm-) diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches (75 mm) long, with two 3/8-inch (10-mm) galvanized eyebolts.
 7. Flags: Standard surveyor's plastic flagging tape, white, 6 inches (150 mm) long.
 8. Proprietary Staking-and-Guying Devices: Proprietary stake and adjustable tie systems to secure each new planting by plant stem; sized as indicated and per manufacturer's written recommendations.
 9. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Arborbrace; ArborBrace Tree Guying System.
 - b. Decorations for Generations, Inc.; Mega Stake System.

2.13 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.

2.14 PLANTING SOIL MIX

- A. Planting soil is defined as soil to be used at open planting areas greater than 100 square feet in surface area or above ground raised planters.
- B. Furnish planting soil consisting of partially decomposed vegetable matter of natural occurrence; black, clean, low in content of mineral or woody material, mildly acid, fertile and friable. Mix with one (1) part of peat to five (5) parts of soil.
- C. Dispose of soil excavated from planting hole that is determined not to be of quality required or is not needed to be used for planting soil.

PART 3 - EXECUTION

3.01 COMMENCEMENT DATE

- A. At the earliest possible date site conditions permit.

3.02 EXAMINATION

- A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Stake out on the ground the location of all plantings and obtain approval of the Landscape Architect before excavation is begun.
- D. Lay out exterior plants at locations directed by Landscape Architect. Stake locations of individual trees and shrubs and outline areas for multiple plantings.
- E. Relocate incorrectly located plants at no expense to the Owner.
- F. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
 - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

3.04 PLANTING BED ESTABLISHMENT

- A. Loosen subgrade of planting beds to a minimum depth of 8 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Apply fertilizer directly to subgrade before loosening.
 - 2. Spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - b. Mix lime with dry soil before mixing fertilizer.
 - 3. Spread planting soil mix to a depth of 8 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil mix.

- B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- C. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

3.05 TREE AND SHRUB EXCAVATION

- A. Pits and Trenches: Excavate the plant pit, centered at the stake locations. Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
 - 1. Excavate a pit at least twice the diameter of the root ball diameter for balled and burlapped or containerized stock.
 - 2. If drain tile is shown or required under planted areas, excavate to top of porous backfill over tile.
- B. Subsoil removed from excavations may be used as backfill.
- C. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 - 1. Hardpan Layer: Drill 6-inch diameter holes, 24 inches apart, into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.
- D. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.06 DRAINAGE TEST

- A. Randomly select a representative number of shrub plant pits in each shrub planting area and test for drainage prior to planting.
- B. Test all tree plant pits for drainage.
- C. Fill each selected plant pit with water and let stand for twenty-four (24) hours.
- D. Do not proceed with planting where drainage problems are apparent.
- E. Report to the Landscape Architect areas which do not fully drain within twenty-four (24) hours.

3.07 FERTILIZING B&B AND CONTAINER GROWN PLANTS

- A. Trees and Shrubs: Mix with backfill.
- B. Overstory Trees: Two (2) pounds per inch of caliper.
- C. Understory Trees: One (1) pound per inch of caliper.
- D. Shrubs: One-quarter (1/4) pound per foot height.
- E. Perennials and Grasses: One-eighth (1/8) pound per plant.

3.08 FERTILIZING MACHINE MOVED PLANTS

- A. Plants moved with tree spade: Spread ten (10) pounds Milorganite or equal in plant pit prior to planting.
- B. Plants moved with tree mover: Spread fifty (50) pounds Milorganite or equal in plant pit prior to planting.

3.09 TREE AND SHRUB PLANTING

- A. Set balled and burlapped and container grown stock plumb and in center of pit or trench with top of root ball even with the adjacent finish grades.
 - 1. Cut cord or wire securing burlap at base of B&B plant and remove burlap from top half of root ball. Remove all excess soil on top of the ball, just exposing the root flare.
 - 2. Remove container from container grown plant and "butterfly" bottom of root ball to expose healthy white roots.
 - 3. Make sure the plant is straight before backfilling. Backfill the plant hole with planting soil placed in layers around the root ball.

4. Carefully tamp each layer in place in a manner to avoid injury to roots or ball.
5. When approximately two-thirds (2/3) of the plant hole, has been backfilled, fill the hole with water and allow the soil to settle around the roots.
6. Set top of root ball 1" above the surrounding grade as shown in the Planting Details.
7. Place mulch as indicated in the Landscape Details.

3.10 TREE AND SHRUB PRUNING

- A. Prune, thin, and shape trees and shrubs as directed by Landscape Architect.
- B. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise indicated by Landscape Architect, do not cut tree leaders; remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character. Shrub sizes indicated are sizes after pruning.

3.11 GUYING AND STAKING

- A. Upright Staking and Tying: Stake trees of 2- through 5-inch caliper. Stake trees of less than 2-inch caliper only as required to prevent wind tip-out. Use a minimum of 2 stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Set vertical stakes and space to avoid penetrating root balls or root masses. Support trees with two strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree. Use the number of stakes as follows:
 1. Use 2 stakes for trees up to 12 feet (3.6 m) high and 2-1/2 inches (63 mm) or less in caliper; 3 stakes for trees less than 14 feet (4.2 m) high and up to 4 inches (100 mm) in caliper. Space stakes equally around trees.
- B. Guying and Staking: Guy and stake trees exceeding 14 feet (4.2 m) in height and more than 3 inches (75 mm) in caliper, unless otherwise indicated. Securely attach no fewer than 3 guys to stakes 30 inches (760 mm) long, driven to grade.
 1. For trees more than 6 inches (150 mm) in caliper, anchor guys to pressure-preservative-treated deadmen 8 inches (200 mm) in diameter and 48 inches (1200 mm) long buried at least 36 inches (900 mm) below grade. Provide turnbuckles for each guy wire and tighten securely.
 2. Attach flags to each guy wire, 30 inches (760 mm) above finish grade.
 3. Paint turnbuckles with luminescent white paint.

3.12 GROUND COVER AND PLANT PLANTING

- A. Set out and space ground cover and plants as indicated on Plant Schedule.
- B. Dig holes large enough to allow spreading of roots, and backfill with planting soil.
- C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.13 PLANTING BED MULCHING

- A. Mulch backfilled surfaces of planting beds and other areas indicated.
 1. Install at consistent depths as shown on the drawings.
 2. Sub-grade surface of areas to receive mulch shall be sloped to drain, smooth and free of ruts and clods.

3.14 CLEANUP AND PROTECTION

- A. During exterior planting, keep adjacent pavings and construction clean and work area in an orderly condition.
- B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

3.15 DISPOSAL

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 32 9200
SEEDING AND SODDING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section covers the furnishing of all labor, equipment, tools, and materials necessary for the performance of seeding and sodding operations as required by the project plans and specifications.
- B. The seeding work shall consist of furnishing and drilling in or sowing seed by an experienced seeding contractor having approved equipment manufactured expressly for the purpose, such as a seed drill, mulch chopper and blower for the application of hay or straw mulch, mulch puncher or straight serrated disc for punching mulch into soil and a cultipacker that may be used for final compaction. The contractor may also use a hydroseeder as an alternative seeding method.
- C. Sod shall be required where areas are disturbed by construction within the right-of-way in established yards or as directed by the City Engineer.
- D. Sod work shall be performed by a Contractor experienced in placing sod.

1.02 REFERENCE STANDARDS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate installation with work of other trades.

1.04 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Certification of each seed mixture for turfgrass sod identifying source, including name and telephone number of supplier.
- C. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.
- D. Qualification Data: For landscape Installer.
- E. Material Test Reports: For existing surface soil and imported topsoil.
- F. Planting Schedule: Indicating anticipated planting dates for each type of planting.
- G. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of lawns and native grasses during a calendar year. Submit before expiration of required maintenance periods.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful lawn establishment.
 - 1. Sod work shall be performed by a Contractor experienced in placing sod.

2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
 - B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
 - C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
 1. Report suitability of topsoil for lawn growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil.
 - D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."
- 1.06 DELIVERY, STORAGE, AND HANDLING
- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.
 - B. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Sodding."
- 1.07 SCHEDULING
- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 1. Seeding and Fertilizing
 - a. Spring Planting: November 15 to June 1
 - b. Fall Planting: August 15 to October 15
 2. Sodding
 - a. Spring Planting: March 15 to June 15
 - b. Fall Planting: September 15 to October 15
 - B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.
 1. Seeding and fertilizing shall not be done during periods of such severe drought, high winds, or excessive moisture, as determined by the Landscape Architect, that satisfactory results are not likely to be obtained.
 2. Sod shall not be placed on frozen ground.
 - C. Any seeding or sodding to be performed during periods other than those previously designated will require a written request to extend the permissible period for performing such work. The Contractor shall explain the reason for the variance and shall include a guarantee of satisfactory results at the end of the first four (4) weeks of the following growing season as previously defined. The Contractor shall agree to perform any necessary re-seeding or re-sodding at that time. The request shall be initiated by the Contractor and submitted to the City Engineer for consideration for approval.
- 1.08 LAWN MAINTENANCE
- A. All seeded areas shall be protected against damage by vehicle and pedestrian traffic by the use of barriers and appropriate warning signs. If at any time before completion and acceptance of the seeding work any portion of the seeded area becomes eroded or otherwise damaged, such damaged areas shall be repaired by filling with soil to original grade, re-seeding and re-mulching. All costs of repair work shall be borne by the Contractor.
 - B. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
 1. Seeded Lawns: Thirty-five (35) days from date of Substantial Completion.
 - a. When full maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.
 - b. Sprinkling of the seeded areas shall be carefully done in such manner as to avoid standing water, surface wash, scour or other erosion.

- 2. Sodded Lawns: Thirty-five (35) days from date of Substantial Completion.
 - a. All sodded areas shall be thoroughly watered twice daily for a period of twenty-one days (21) after placing, except when thoroughly wetted by rain of 1/4-inch (1/4") or more in a 24-hour period.
- C. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn.
 - 1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch. Anchor as required to prevent displacement.
- D. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches (100 mm).
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water lawn at a minimum rate of 1 inch (25 mm) per week.
- E. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - 1. Mow grass 1-1/2 to 2 inches (38 to 50 mm) high.
 - 2. Mow grass 2 to 3 inches (50 to 75 mm) high.
- F. Lawn Postfertilization: Apply fertilizer after initial mowing and when grass is dry.
 - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to lawn area.

PART 2 - PRODUCTS

2.01 SEED

- A. Seeds for cover crops shall be the kind and mixture of seeds specified herein. Seeds shall be free of prohibited weed seeds and shall not have more than 1 percent (1%) noxious weed seeds. Seeds shall be delivered to the site in labeled containers bearing the name of the producer. A certificate showing the percentage of the purity and germination of each kind of seed specified shall be submitted to the City Engineer for approval.
- B. The following formula shall be used to determine the amount of commercial seed required:
 - 1. $\text{Pounds of Commercial Seed Required} = 10,000 \times \frac{\text{Rate of Pure Live Seeds (lbs/acre)}}{\text{Purity \%} \times \text{Germination \%}}$
- C. Where seeding is required in areas of established yards, shoulders, slopes, (in street right-of-way), median islands, and any other areas where a high-quality seeding is deemed necessary, the seed mixture will be as follows:

KIND OF SEED	MINIMUM PURE LIVE SEED (%)	RATE OF PURE LIVE SEED POUNDS/ACRE
Turf-type Tall Fescue (Rebel II or equivalent)	80%	300
		Total 300 lbs/Acre

- D. Where seeding is required in areas off street right-of-way that are not maintained periodically, the seed mixture will be as follows:

KIND OF SEED	MINIMUM PURE LIVE SEED (%)	RATE OF PURE LIVE SEED POUNDS/ACRE
Alta Fescue or Kentucky 31 Fescue (Festuca Elatior) Var. Arundinces)	75%	140 lbs.
		Total 140 lbs./Acre

2.02 TURFGRASS SOD

- A. Turfgrass Sod: The sod shall be densely-rooted Turf Type Tall Fescue. Kentucky bluegrass sod may be used if matching sod on a specific property. The sod shall contain a growth of not more than 10 percent (10%) of other grasses and clovers, shall be free from all prohibited and noxious weeds, and shall be three-fourths inch (3/4") to one and one-fourth inch (1-1/4") thick; each strip containing at least one (1) square yard. Sod shall be cut in strips not less than twelve inches (12") wide. Sod placed in existing yards shall match the type in place.

2.03 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth.
1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.
 2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.
 3. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.

2.04 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
1. Class: Class T, with a minimum 99 percent passing through No. 8 (2.36-mm) sieve and a minimum 75 percent passing through No. 60 (0.25-mm) sieve.
 2. Provide lime in form of dolomitic limestone.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 (3.35-mm) sieve and a maximum 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- G. Sand: Clean, washed, natural or manufactured, free of toxic materials.

- H. Diatomaceous Earth: Calcined, diatomaceous earth, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
 - I. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.
- 2.05 ORGANIC SOIL AMENDMENTS
- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
 - B. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
 - C. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
 - D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
 - 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 lb (2.4 kg) of ammonium nitrate or 0.25 lb (4 kg) of ammonium sulfate per cubic foot (cubic meter) of loose sawdust or ground bark.
 - E. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- 2.06 PLANTING ACCESSORIES
- A. Selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.
- 2.07 FERTILIZER
- A. Commercial fertilizer for seeded or sodded areas shall contain 12 percent (12% by weight) nitrogen, 12 percent (12% by weight) phosphoric acid, and 12 percent (12% by weight) potash. It shall be uniform in composition, free flowing, and delivered to the site in standard size bags, showing weight, analysis, and name of manufacturer. It shall be stored until use in a weatherproof storage place in such a manner that it will be kept dry and its effectiveness will not be impaired
- 2.08 MULCHES
- A. Preferred mulch materials for application to seedbed areas are smooth brome grass hay, Sudan grass hay or prairie hay. Prairie hay shall consist chiefly of bluestem grasses, switchgrass, Indian grass and other desirable native perennial grasses. Mulch shall be free of prohibited and noxious weed seeds. Other mulching materials may be used with the approval of the Landscape Architect.
- 2.09 EROSION-CONTROL MATERIALS
- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches (150 mm) long.
 - B. Erosion-Control Fiber Mesh: Biodegradable twisted jute or spun-coir mesh, a minimum of 0.92 lb/sq. yd. (0.5 kg/sq. m), with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches (150 mm) long.

PART 3 - EXECUTION**3.01 EXAMINATION**

- A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect adjacent and adjoining areas from hydroseeding overspray.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.03 SEEDING

- A. The area to be seeded shall be thoroughly tilled to a depth of at least three inches (3") by discing, harrowing or other approved methods until the soil is well pulverized. After completion of the tilling operation, the surface shall be cleared of all stones, stumps, or other objects larger than 1-1/2 inches (1-1/2") in diameter, and of roots, wire, grade stakes, and other objects that might be a hindrance to maintenance operations. Areas tilled shall then be brought to the desired line and grade and maintained until seeding and mulching is complete to ensure a smooth area with no gullies or depressions.
- B. Any objectionable undulations or irregularities in the surface resulting from tilling or other operations shall be removed before planting operations have begun. Seed bed preparation shall be performed only during periods when satisfactory results are likely to be obtained. When results are not satisfactory because of drought, excessive moisture or other causes, the work shall be stopped until such conditions have been corrected to the satisfaction of the City Engineer.
- C. Seeding may be accomplished by means of approved mechanical seed drills followed by packer wheels, or by broadcast-type seeders or hydraulic type seeders in small areas not accessible to machine methods, or as approved by the City Engineer. Seed drills shall have depth bands set to maintain a planting depth of at least one-quarter inch (1/4") but not to exceed one-half inch (1/2"). All seed sown by broadcast-type seeders shall be "raked in" or otherwise covered with soil to a depth of at least one-quarter inch (1/4") and rolled to obtain a firm seed bed. Water shall be applied when necessary.
 - 1. Do not use wet seed or seed that is moldy or otherwise damaged.
- D. Hydraulic seeding equipment shall include a pump capable of being operated at 100 gallons per minute and at 100 pounds per square inch pressure, unless otherwise directed. The equipment shall have an acceptable gauge and a nozzle adaptable to hydraulic seeding requirements. Storage tanks shall have a means of agitation and a means of estimation of the volume used, or remaining in the tank.
- E. Seed shall not be drilled or sown during windy weather or when the ground is frozen or otherwise untillable. When a seed drill is used, it shall be set to space the rows not more than 4 inches (4") apart.
- F. Sow seed at the rate outlining under the 'Products' section of this specification.
- G. Rake seed lightly into top 1/8 inch (3 mm) of topsoil, roll lightly, and water with fine spray.
- H. Protect seeded areas with slopes exceeding 1:6 with erosion-control fiber mesh and 1:4 with erosion-control blankets installed and stapled according to manufacturer's written instructions.
- I. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre (42 kg/92.9 sq. m) to form a continuous blanket 1-1/2 inches (38 mm) in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
 - 1. Anchor straw mulch by crimping into topsoil with suitable mechanical equipment.
 - 2. Bond straw mulch by spraying with asphalt emulsion at the rate of 10 to 13 gal./1000 sq. ft. (38 to 49 L/92.9 sq. m). Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.

- J. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch within 24 hours after completing seeding operations. Soak and scatter uniformly to a depth of 3/16 inch (4.8 mm) and roll to a smooth surface.
 - K. Limit lawn subgrade preparation to areas to be planted.
 - L. Restore areas if eroded or otherwise disturbed after finish grading and before planting.
- 3.04 MULCHING
- A. Hay mulch shall be applied uniformly to seeded areas at the rate of not less than two (2) tons per acre. Baled hay shall be broken up and loosened sufficiently before being fed into the blower hopper to avoid the placing of matted or unbroken clumps. The use of wet hay is prohibited.
 - B. Mulching shall be performed within twenty-four (24) hours after seeding, but not be done during windy or rainy weather or when such weather is imminent. Mulching shall be started at the windward side of relatively flat areas, or at the upper part of steep slopes and shall continue uniformly until each area is covered.
 - C. The mulching material shall be disced or punched into the soil so that it is partially covered. Several passes may be required, if a straight disc is used, in order to mix the mulching material with the topsoil sufficiently to ensure protection from erosion by either wind or water. The mulch tilling operation shall be performed parallel to the ground contours.
- 3.05 FERTILIZING
- A. Once the seed has been installed, the contractor shall apply fertilizer at ½ lb. to 1 lb of nitrogen per 1000 square feet of area. Do Not incorporate fertilizer into the prepared seed bed.
- 3.06 SODDING
- A. The sod bed shall have a uniform surface free from washes and depressions and shall conform to the finished grade profile or cross section shown on the plans. The soil shall be thoroughly tilled to a depth of two inches (8") with 4" of freshly placed topsoil on top to meet desired finished grade. Soils are to be tested as stated above and amended as necessary to meet recommended levels specified by the testing facility. Areas which have become dry and crusted over, shall be tilled as specified above, prior to placing the sod. The Contractor must have the prepared sod bed inspected and approved by the City Engineer prior to any sod being placed. Any sod placed prior to the sod bed being inspected and approved by the City Engineer is subject to being removed, the deficiencies corrected, and the sod replaced at the Contractor's expense.
 - B. The sod beds shall be in a firm but not too compacted condition with relatively fine texture at the time of sodding. Sod shall be moist when it is placed. The use of dry sod will not be permitted. Sod strips shall be laid along contour lines by hand, commencing at the lowest point of the area and working upward. The transverse joints of sod strips shall be staggered and the sod carefully placed to reduce tight joints. The sod shall be firmed immediately after it is placed. The "firming" shall be accomplished by application of a roller weighing not less than sixty (60) nor more than ninety (90) pounds per linear foot of roller. On steep slopes, the sod may be firmed by compacting with hand shovels. The firming process shall pack the sod roots firmly into the prepared soil. Do Not water and then roll the sod or firm the sod.
 - C. Sod shall be transplanted within twenty-four (24) hours from the time it is harvested. All sod in stacks shall be kept moist and protected from exposure to the sun and from freezing.
 - D. Do not lay sod if dormant or if ground is frozen or muddy.
 - E. Sod placed next to existing grassy areas, curbs, sidewalks or like boundaries shall be placed to match existing grades.
 - F. Anchor sod on slopes exceeding 1:6 with steel staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage
 - G. The Contractor shall water installed sod immediately after installing and shall water all sod twice daily for a minimum of twenty-one (21) days from initial placement, except on those days where a minimum of 1/4 inch (1/4") of rain falls in a twenty-four hour period.

3.07 LAWN RENOVATION

- H. Renovate existing lawn.
- B. Renovate existing lawn damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
 - 1. Reestablish lawn where settlement or washouts occur or where minor regrading is required.
- C. Remove sod and vegetation from diseased or unsatisfactory lawn areas; do not bury in soil.
- D. Remove topsoil containing foreign materials resulting from Contractor's operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.
- E. Mow, dethatch, core aerate, and rake existing lawn.
- F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches (150 mm).
- I. Apply soil amendments and initial fertilizers required for establishing new lawns and mix thoroughly into top 4 inches (100 mm) of existing soil. Provide new planting soil to fill low spots and meet finish grades.
- J. Apply sod as required for new lawns.
- K. Water newly planted areas and keep moist until new lawn is established.

3.08 SATISFACTORY LAWNS

- L. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 70 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches (125 by 125 mm).
- B. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
- C. Satisfactory Plugged Lawn: At end of maintenance period, the required number of plugs has been established as well-rooted, viable patches of grass; and areas between plugs are free of weeds and other undesirable vegetation.
- D. Satisfactory Sprigged Lawn: At end of maintenance period, the required number of sprigs has been established as well-rooted, viable plants; and areas between sprigs are free of weeds and other undesirable vegetation.
- E. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

3.09 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.
- C. Remove erosion-control measures after grass establishment period.

3.10 GUARANTEE.

- A. The Contractor will be required to guarantee all sod installed on this project for twenty-one (21) days from the date of installation. After the twenty-one day period, the City Engineer will inspect all sod. Any sod that is dead at the end of the twenty-one day period shall be replaced by the Contractor at his expense and is subject to an additional twenty-one day warranty period. All healthy sod at the end of the twenty-one day period will be accepted by the City Engineer and turned over to the property owner for maintenance. The

Contractor is not required to guarantee any healthy sod accepted by the City Engineer after the twenty-one day period.

- B. Seeded areas will not be accepted until there is a minimum of 70% coverage of healthy grass.

3.11 RECORD KEEPING.

- A. The Contractor shall maintain a log of his watering operations and rain events to show compliance with the watering requirements for seeding and sodding. The Contractor shall submit the records to the City Engineer at the end of the required maintenance period. The seeded and/or sodded areas shall not be approved until the submittal has been received and reviewed by the City Engineer.

END OF SECTION

TECHNICAL SPECIFICATIONS
FDP Submittal
February 13, 2024

Mohawk Park Phase 2
City of Mission, KS



SECTION 02 2700 - PROTECTION AND EROSION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Silt fences
- B. Inlet Filters

1.02 RELATED SECTIONS:

- A. Section 329119- Landscape Grading.

1.03 QUALITY ASSURANCE

- A. Perform work in accordance with Kansas Department of Transportation standards.

1.04 SUBMITTALS FOR REVIEW

- A. Submittals: Procedures for submittals and SWPPP Plan
- B. Product Data: Provide data for silt fence fabric and posts.
- C. Manufacturer's Installation Instructions: Indicate special procedures, positioning of posts, attachment, and perimeter conditions requiring special attention.

PART 2 - PRODUCTS

2.01 SILT FENCE MATERIALS

- A. Manufacturers:
 - 1. Reference Manufacturer: Mercantile Development, Inc. - Product: Geofab Silt Fence.
 - 2. Other acceptable Manufacturers:
 - a. Amoco Construction Fabrics.
 - 3. Section 01600 - Materials and Equipment: Product options and substitutions. Substitutions: Permitted.
- B. Silt Fence Fabric: 100 percent spunbound nylon reinforced with polyester netting, 4.2 ounces per square yard minimum, 36 inches minimum width; equip with enclosed attachment and support cord.
- C. Posts: Steel, 'T' section, 1.3 pounds per foot; equip with anchor plate.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of existing conditions before starting work.
- B. Verify that subgrade is ready to receive the work of this section.

3.02 PREPARATION

- A. Trench along silt fence line to required elevations.

- B. Remove large stones or other hard matter which could damage silt fence or impede consistent backfilling or compaction.

3.03 INSTALLATION - SILT FENCES

- A. Install silt fence and posts in accordance with fence manufacturer's instructions.
- B. Space posts 8 feet apart to height of 24 inches above subgrade.
- C. Secure fabric to posts, drape bottom of fabric into trench, backfill trench.

3.04 CLEANING

- A. Remove accumulated sediment and repair silt fence periodically.
- B. Remove silt fence, posts, and accumulated sediment prior to landscape grading.

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.
- B. Abandonment in place of existing utilities and utility structures.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Sequencing and staging requirements.
- C. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- D. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- E. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- F. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Site Plan: Showing:
 - 1. Vegetation to be protected.
 - 2. Areas for temporary construction and field offices.
 - 3. Areas for temporary and permanent placement of removed materials.
- C. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
 - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences.
 - 2. Identify demolition firm and submit qualifications.
- D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SCOPE

- A. Remove portions of existing buildings as required to maintain facility operations. Contractor shall determine appropriate scheduling and coordinate with Owner with minimum 14 days in advance of demolition activities.
- B. Remove paving and curbs as required to accomplish new work.
- C. Within area of new construction, remove foundation walls and footings to a minimum of 2 feet (600 mm) below finished grade.
- D. Remove concrete slabs on grade as needed to achieve new work or as indicated on drawings.
- E. Remove other items indicated, for salvage, relocation, and recycling.
- F. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as required so that required rough grade elevations do not subside within one year after completion.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with other requirements specified in Section 01 7000.
- B. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Use of explosives is not permitted.
 - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
 - 4. Provide, erect, and maintain temporary barriers and security devices.
 - 5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 - 6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 - 7. Do not close or obstruct roadways or sidewalks without permit.
 - 8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
 - 9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- C. Do not begin removal until receipt of notification to proceed from Owner.
- D. Do not begin removal until built elements to be salvaged or relocated have been removed.
- E. Do not begin removal until vegetation to be relocated has been removed and specified measures have been taken to protect vegetation to remain.
- F. Protect existing structures and other elements that are not to be removed.
 - 1. Provide bracing and shoring.
 - 2. Prevent movement or settlement of adjacent structures.
 - 3. Stop work immediately if adjacent structures appear to be in danger.
- G. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- H. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- I. Perform demolition in a manner that maximizes salvage and recycling of materials.
 - 1. Dismantle existing construction and separate materials.
 - 2. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.
- J. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

3.03 EXISTING UTILITIES

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
 - 1. Verify that construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from other areas that are still occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
 - 2. Remove items indicated on drawings.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. Verify that abandoned services serve only abandoned facilities before removal.
 - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.

3.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

**SECTION 31 0000
EARTHWORK**

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including Bidding Requirements, General and Supplementary Conditions and Division 01 Specification Sections, apply to work specified in this Section.
- B. APWA 2100 Grading and Site Preparation
- C. APWA 2400 Seeding, Sodding and Overseeding

1.02 SUMMARY

- A. This Section includes all labor, materials, equipment and supervision required to furnish and install the following:
 - 1. Protecting existing vegetation to remain
 - 2. Removing existing vegetation
 - 3. Clearing and grubbing
 - 4. Stripping and stockpiling topsoil
 - 5. Stripping and stockpiling rock
 - 6. Removing above- and below-grade site improvements
 - 7. Temporary erosion control

1.03 CODES, PERMITS AND FEES

- A. Obtain any necessary permits for this Section of Work and pay any fees required for permits.
- B. The entire installation shall fully comply with all local and state laws and ordinances, and with all established codes applicable thereto.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials and place in designated area with adequate protection.

1.05 COORDINATION

- A. Coordinate installation of required devices and other structural components as they are constructed.
- B. Coordinate installation of identifying devices after completing covering and painting if devices are applied to surfaces.

1.06 JOB CONDITIONS

- A. Existing Utilities:
 - 1. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during this work.
 - 2. Underground utilities shown on the drawings have been taken from existing public records, Owner's records available drawings and are correct to the best of our knowledge, provided for information only.
 - 3. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult Utility Owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities caused by Contractor's negligence to the satisfaction of Utility Owner at no cost to the Project Owner.

4. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, during occupied hours, except when permitted in writing by Landscape Architect and then only after acceptable temporary utility services have been provided.
 5. Provide minimum of 48-hour notice to Owner and Landscape Architect and receive written notice to proceed before interrupting any utility.
- B. Protection of Persons and Property:
PRODUCT DATA SHEET 1 -
1. Barricade open excavations occurring as part of this work and post with warning lights.
 2. Operate warning lights as recommended by authorities having jurisdiction.
 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by this work.

1.09 INSPECTION AND APPROVAL

- A. All materials described and specified herein are subject to inspection and approval by Owner's Representative.
- B. Materials may be inspected by the Owner's Representative at source of supply or the Owner's Representative may require the Contractor to submit color photographs which illustrate the specified plant material at the source of supply.
- C. This inspection does not waive the right to reject any material after it has been delivered to the site and/or installed.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Only soil approved by the County of Johnson County, respective APWA Sections will be allowed.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been flagged and that protected zones have been identified and enclosed.
- C. Protecting existing site improvements to remain from damage during construction.
- D. Restore damaged improvements to their original conditions, as accepted to the Owner.

3.02 TEMPORARY EROSION AND SEDIMENT CONTROL

- A. Provide temporary erosion- and sedimentation-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, according to erosion- and sedimentation-control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

3.03 TREE AND PLANT PROTECTION

- A. Protect trees and plants remaining on-site according to drawings.
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations according to drawings.

3.04 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or be relocated.
 - 2. Grind down stumps and remove roots larger than 2 inches (50 mm) in diameter, obstructions, and debris to a depth of 48 inches (1,200 mm) below exposed subgrade.
 - 3. Use only hand methods or air spade for grubbing within protection zones.
 - 4. Chip removed tree branches and stockpile in areas approved by Architect.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches (200 mm), and compact each layer to a density equal to adjacent original ground.

3.05 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to depth of 6 inches (150 mm) in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and non-soil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
 - 1. Limit height of topsoil stockpiles to 96 inches (2400 mm).
 - 2. Do not stockpile topsoil within protection zones.
 - 3. Dispose of surplus topsoil. Surplus topsoil is that which exceeds quantity indicated to be stockpiled or reused.
 - 4. Stockpile surplus topsoil to allow for re-spreading deeper topsoil.

3.06 STOCKPILING ROCK

- A. Remove from construction area naturally formed rocks that measure more than 1 foot (300 mm) across in least dimension. Do not include excavated or crushed rock.
 - 1. Separate or wash off non-rock materials from rocks, including soil, clay lumps, gravel, and other objects larger than 2 inches (50 mm) in diameter; trash, debris, weeds, roots, and other waste materials.
- B. Stockpile rock away from edge of excavations without intermixing with other materials. Cover to prevent windblown debris from accumulating among rocks.
 - 1. Limit height of rock stockpiles to 36 inches (900 mm).
 - 2. Do not stockpile rock within protection zones.
 - 3. Dispose of surplus rock. Surplus rock is that which exceeds quantity indicated to be stockpiled or reused.

3.07 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain with two coats of antirust coating, following coating manufacturer's written instructions. Keep paint off surfaces that will remain exposed.

3.08 DISPOSAL OF SURPLUS AND WASTE MATERIAL

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Burning tree, shrub, and other vegetation waste is permitted according to burning requirements and permitting of authorities having jurisdiction. Control such burning to produce the least smoke or air pollutants and minimum annoyance to surrounding properties. Burning of other waste and debris is prohibited.
- C. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing with other materials, and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION

SECTION 32 9000
EXTERIOR PLANTINGS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including Bidding Requirements, General and Supplementary Conditions and Division 1 Specification Sections, apply to work specified in this Section.

1.02 SUMMARY

- A. This Section includes all labor, materials, equipment and supervision required to furnish and install the following:
1. Trees
 2. Shrubs.
 3. Ground cover.
 4. Perennials and Grasses.

1.03 WORK SPECIFIED ELSEWHERE

- A. Section 31 1000 – ‘Clearing and Site Preparation’ for site clearing and earth moving.

1.04 DEFINITIONS

- A. Balled and Burlapped Stock: Exterior plants dug with firm, natural balls of earth in which they are grown, with ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of tree or shrub required; wrapped, tied, and rigidly supported, as recommended by ANSI Z60.1. Designated as “B&B”.
1. Balls: Firmly wrapped with burlap or similar biodegradable material and bound with twine, cord or wire mesh.
 2. Broken or loose balls will not be accepted.
- B. Balled and Potted Stock: Exterior plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of exterior plant required per Plant Schedule.
- C. Bare-Root Stock: Exterior plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for kind and size of exterior plant required per Plant Schedule.
- D. Container-Grown Stock: Healthy, vigorous, well-rooted exterior plants grown in a container with well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for kind, type, and size of exterior plant required per Plant Schedule.
- E. Finish Grade: Elevation of finished surface of planting soil.
- F. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- G. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- H. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill, before placing planting soil.
- I. Plant Schedule: A list of plant materials is scheduled on the Drawing. In the event of any discrepancy between this schedule and the Plan Drawing showing the plants, the Plan Drawing shall govern.

- J. PLANET Certification: The Professional Landcare Network (PLANET) is an international association serving lawn care professionals, landscape management, design/build/installation professionals, irrigation & water management and interior plantscapers. The International Certification Council (ICC) is the group that seeks to make that vision a reality by establishing certification programs, administering exams, and enforcing ethical compliance of all certification programs on behalf of PLANET. For more information, visit <http://www.landcarenetwork.org>.
- 1.05 SUBMITTALS
- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each of the following:
1. 1 quart for each color and texture of wood mulch required, in labeled plastic bags.
- C. Product Certificates: For each type of manufactured product, signed by product manufacturer, and complying with the following:
1. Manufacturer's certified analysis for standard products.
 2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- D. Qualification Data: For landscape Installer. Submit all applicable corporate certificates and certifications for all technicians and jobsite supervisors.
1. Proof of Contractor PLANET Certification.
 - a. Proof of certification shall be submitted to Landscape Architect within 21 days following the award of Contract and should be maintained on jobsite at all times.
- E. Material Test Reports: For existing surface soil and imported topsoil.
- F. Planting Schedule: Indicating anticipated planting dates for exterior plants.
- G. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of exterior plants during a calendar year. Submit before expiration of required maintenance periods.
- 1.06 QUALITY ASSURANCE
- A. Installer Qualifications: A qualified PLANET Landscape Industry Certified Technician (www.landcarenetwork.org) with a minimum of five (5) years experience similar in material, design and extent to that indicated for this project and whose work has resulted in successful establishment of exterior plants.
1. Installer's Field Supervision: Require Installer to maintain an experienced full-time PLANET Landscape Industry Certified supervisor on Project site when exterior planting is in progress.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
1. Report suitability of topsoil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil.
- D. Provide quality, size, genus, species, and variety of exterior plants indicated, complying with applicable requirements in ANSI Z60.1, "American Standard for Nursery Stock." In the event there is a discrepancy between these standards and this Specification, the most restrictive requirement shall govern.
- E. Tree and Shrub Measurements: Measure according to ANSI Z60.1 with branches and trunks or canes in their normal position. Do not prune to obtain required sizes. Take caliper measurements 6 inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip-to-tip.
1. Equal or exceed measurements specified in Plant Schedule.

1.07 CODES, PERMITS AND FEES

- A. Obtain any necessary permits for this Section of Work and pay any fees required for permits.
- B. The entire installation shall fully comply with all local and state laws and ordinances, and with all established codes applicable thereto.

1.08 JOB CONDITIONS

- A. Existing Utilities:
 - 1. Locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during this work.
 - 2. Underground utilities shown on the drawings have been taken from existing public records, Owner's records available drawings and are correct to the best of our knowledge, provided for information only.
 - 3. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult Utility Owner immediately for directions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities caused by Contractor's negligence to the satisfaction of Utility Owner at no cost to the Project Owner.
 - 4. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, during occupied hours, except when permitted in writing by Landscape Architect and then only after acceptable temporary utility services have been provided.
 - 5. Provide minimum of 48-hour notice to Owner and Landscape Architect and receive written notice to proceed before interrupting any utility.
- B. Protection of Persons and Property:
 - 1. Barricade open excavations occurring as part of this work and post with warning lights.
 - 2. Operate warning lights as recommended by authorities having jurisdiction.
 - 3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout and other hazards created by this work.

1.09 INSPECTION AND APPROVAL

- A. All materials described and specified herein are subject to inspection and approval by Owner's Representative.
- B. Materials may be inspected by the Owner's Representative at source of supply or the Owner's Representative may require the Contractor to submit color photographs which illustrate the specified plant material at the source of supply.
- C. This inspection does not waive the right to reject any material after it has been delivered to the site and/or installed.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver exterior plants freshly dug.
 - 1. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
- B. Do not prune trees and shrubs before delivery, except as approved by Landscape Architect. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of exterior plants during delivery. Do not drop exterior plants during delivery.
- C. Lift and handle plants from the bottom of the root ball only.
- D. Plants moved with a ball will not be accepted if root ball is cracked, loose or broken before or during planting operations.
- E. Deliver exterior plants after preparations for planting have been completed and install immediately. If planting is delayed more than six hours after delivery, set exterior plants trees in shade, protect from weather and mechanical damage, and keep roots moist.
 - 1. Heel-in bare-root stock. Soak roots in water for two hours if dried out.
 - 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
 - 3. Do not remove container-grown stock from containers before time of planting.

4. Water root systems of exterior plants stored on-site with a fine-mist spray. Water as often as necessary to maintain root systems in a moist condition.

F. Deliver fertilizer to site in original, unopened containers, each bearing manufacturer's guaranteed analysis.

G. Store packaged materials off the ground and protect from moisture.

1.11 COORDINATION

A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.

1. Deciduous trees and shrubs: April 1 to June 1 and August 15 to November 15.

2. Evergreen trees and shrubs: April 1 to June 1 and August 15 to October 15

B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.

C. Coordination with Lawns: Plant trees and shrubs after finish grades are established and before planting lawns, unless otherwise acceptable to Landscape Architect.

1. When planting trees and shrubs after lawns, protect lawn areas and promptly repair damage caused by planting operations.

1.12 WARRANTY

A. General Warranty: The special warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to and run concurrent with, other warranties made by the contractor under requirements of the Contract Documents.

B. Special Warranty: Warrant living trees and shrubs for a period of one (1) year after date of Substantial Completion, against defects including death and unsatisfactory growth, except for defects resulting from lack of adequate maintenance, neglect, or abuse by Owner, abnormal weather conditions unusual for warranty period, or incidents which are beyond Contractor's control.

C. Plants shall be alive and in good, healthy and flourishing condition of growth at the end of the warranty period.

D. At the end of the guaranty period, final inspection will be made by owner's Representative upon written notice requesting such inspection; submit notice to Owner's Representative at least ten (10) days before the anticipated date of inspection.

E. Any plant, required under this Contract, that is dead or not in a vigorous, thriving condition, as determined by Owner's Representative at the time of Final Inspection, will be removed from the site.

F. Plants that are missing at the time of Final Inspection are to be installed during the specified planting season when weather and site conditions permit.

G. In case of any questions regarding the condition and satisfactory establishment of a rejected plant, the Landscape Contractor may elect to allow such plant to remain through another complete growing season. If at that time the rejected plant is found to be dead, in an unhealthy or badly impaired condition, it shall be replaced.

H. After Substantial Completion, replace plants (once during or at the end of the guaranty period) that are observed to be dead or in a badly impaired condition.

I. One replacement after Substantial Completion shall constitute fulfillment of Contractor's warranty for the particular plant replaced.

J. Replacement Plants: Plants of the same kind and size as specified in the Plant Schedule; furnished and planted as specified herein.

K. Replacement Plants: Guyed or staked, mulched, wrapped, fertilized, pruned and restored to original condition as originally specified at no cost to Owner.

L. Make all necessary repairs to grades, lawns and paving required because of plant replacements, at no cost to the Owner.

- M. Plant Replacement Cost: Borne by Contractor except for possible replacements resulting from removal, loss or damage due to occupancy of project in any part, vandalism, civil disobedience, or acts of neglect on the part of others, physical damage by animals, vehicles, fire, etc., or losses due to curtailment of water by local authority, or to "Acts of God". Floods, tornadoes, wind of hurricane force, and hail are not normal and the damage they do cannot be calculated in a bid.
- 1.13 MAINTENANCE
- A. Begin immediately following installation of plants and continue until Substantial Completion.
- B. Include watering, weeding, cultivating, mulching, removal of dead material, resetting plants to proper grades or upright position and restoration of the planting saucer, and other necessary operations.
- C. If any planting is done after lawn preparation, provide proper protection to lawn areas and repair any damage resulting from planting operation promptly at no cost to the Owner.
- D. Maintenance after Final Acceptance of the planting will be performed by the Owner.
- E. Furnish detailed written recommended maintenance program to the Owner with a copy to Landscape Architect, prior to Substantial Completion of the various planting areas.
- F. Maintenance performed by the Owner in accordance with recommended program will not affect the Landscape Contractor's obligation to guarantee and replace defective plants as herein described.

PART 2 - PRODUCTS

2.01 TREE AND SHRUB MATERIAL

- A. General: Furnish nursery-grown trees and shrubs complying with ANSI Z60.1, with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock free of disease, insects, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
- B. Grade: Provide trees and shrubs of sizes and grades complying with ANSI Z60.1 for type of trees and shrubs required. Trees and shrubs of a larger size may be used if acceptable to Landscape Architect, with a proportionate increase in size of roots or balls.
- C. Certification of inspection of plant materials required by Federal, State or other governmental agencies to accompany all shipments to be furnished to the Owner's Representative.
- D. Nomenclature: The names of plants required under this Contract conform to those given in the "Standardized Plant Names", 1942 Edition, prepared by the American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery trade.
- E. Species and Variety: True to name as specified. Plants approved as true to name at time of initial acceptance which, during the warranty period, exhibit characteristics indicating they are not true to name will be replaced at no cost to the Owner.
- F. Availability: Before submitting his bid, the Contractor shall have investigated the sources of supply and satisfied himself that he can supply the listed plants in the size, variety and quality listed and specified. Failure to take this precaution will not relieve the Contractor from his responsibility for furnishing and installing all plant materials in strict accordance with the Contract Documents without additional cost to the Owner.
- G. Quality:
1. Growth habit typical for species and as indicated on the Plant Schedule.
 2. Sound, healthy, vigorous and free from insect pests, plant diseases and injuries.
 3. One sided plants or plants taken from tightly planted nursery rows will be rejected.
- H. Size and Form:
1. Equal or exceed measurements specified in the Plant Schedule.
 2. Measured before pruning with branches in normal position. Height and spread specified refers to main body of plant and not from tip to tip of branches or roots.

3. Caliper of trees four inches (4") and less- taken six inches (6") above ground level. Trees over four inches (4") - measured one foot (12") above ground level.
4. Specified trunk height can be obtained by pruning lower branches of a plant after the plant has been installed; however, pruning to achieve specified trunk height is to occur after owner's Representative has inspected plant and directed Contractor as to the amount of pruning required.
5. Where specified by caliper, no one stem of a specific multi-stemmed plant shall be smaller than the caliper size specified.

- I. Label each tree and shrub with securely attached, waterproof tag bearing legible designation of botanical and common name.
- J. Label at least one tree and one shrub of each variety and caliper with a securely attached, waterproof tag bearing legible designation of botanical and common name.
- K. If formal arrangements or consecutive order of trees or shrubs is shown, select stock for uniform height and spread, and number label to assure symmetry in planting.

2.02 OVERSTORY TREES

- A. Overstory Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required by Plant Schedule.
 1. Provide balled and burlapped trees.
- B. Root-Ball Depth: Furnish trees with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.03 UNDERSTORY TREES

- A. Understory Trees: Single-stem trees with straight trunk, well-balanced crown, and intact leader, of height and caliper indicated, complying with ANSI Z60.1 for type of trees required by Plant Schedule.
 1. Provide balled and burlapped trees.
- B. Root-Ball Depth: Furnish trees with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.04 DECIDUOUS SHRUBS

- A. Form and Size: Deciduous shrubs with not less than the minimum number of canes required by and measured according to ANSI Z60.1 for type, shape, and height of shrub required by Plant Schedule.
- B. Root-Ball Depth: Furnish shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.

2.05 GROUND COVER PLANTS

- A. Ground Cover: Provide ground cover of species indicated, established and well rooted in pots or similar containers, and complying with ANSI Z60.1 and the Plant Schedule.

2.06 PLANTS

- A. Perennials: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed.
- B. Grasses: Provide healthy, field-grown plants from a commercial nursery, of species and variety shown or listed.

2.07 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 6 to 7, a minimum of 4 percent organic material content; free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.
 1. Topsoil Source: Reuse surface soil stockpiled on-site. Independent soil testing is required to verify suitability of stockpiled surface soil to produce topsoil. Amend soil as recommended by soil testing agency to meet organic content and pH requirements. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.

- a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.
2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.
3. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.

2.08 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
 1. Class: Class T, with a minimum 99 percent passing through No. 8 (2.36-mm) sieve and a minimum 75 percent passing through No. 60 (0.25-mm) sieve.
 2. Class: Class O, with a minimum 95 percent passing through No. 8 (2.36-mm) sieve and a minimum 55 percent passing through No. 60 (0.25-mm) sieve.
 3. Provide lime in form of dolomitic limestone.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 (3.35-mm) sieve and a maximum 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- G. Sand: Clean, washed, natural or manufactured, free of toxic materials.
- H. Diatomaceous Earth: Calcined, diatomaceous earth, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
- I. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

2.09 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1/2-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 1. Organic Matter Content: 50 to 60 percent of dry weight.
 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
- B. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
- C. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
- D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 lb (2.4 kg) of ammonium nitrate or 0.25 lb (4 kg) of ammonium sulfate per cubic foot (cubic meter) of loose sawdust or ground bark.

- E. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- 2.10 FERTILIZER
- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 4 percent nitrogen and 20 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
1. Composition: 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing agency.
- 2.11 MULCHES
- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
1. Type: Shredded hardwood
 2. Sive range: 3 inches maximum, ½ inch minimum
 3. Color: Natural
 4. Walnut products are prohibited.
 5. Depth and locations as shown on drawings.
 6. Furnish in bags or bulk.
 7. Submit sample for approval by Landscape Architect.
- 2.12 TREE STABILIZATION MATERIALS
- A. Stakes and Guys
1. Upright and Guy Stakes: Rough-sawn, sound, new hardwood, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal (38-by-38-mm actual) by length indicated, pointed at one end.
 2. Wood Deadmen: Timbers measuring 8 inches (200 mm) in diameter and 48 inches (1200 mm) long, treated with specified wood pressure-preservative treatment.
 3. Flexible Ties: Wide rubber or elastic bands or straps of length required to reach stakes or turnbuckles.
 4. Guys and Tie Wires: ASTM A 641/A 641M, Class 1, galvanized-steel wire, two-strand, twisted, 0.106 inch (2.7 mm) in diameter.
 5. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
 6. Guy Cables: Five-strand, 3/16-inch- (4.8-mm-) diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches (75 mm) long, with two 3/8-inch (10-mm) galvanized eyebolts.
 7. Flags: Standard surveyor's plastic flagging tape, white, 6 inches (150 mm) long.
 8. Proprietary Staking-and-Guying Devices: Proprietary stake and adjustable tie systems to secure each new planting by plant stem; sized as indicated and per manufacturer's written recommendations.
 9. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Arborbrace; ArborBrace Tree Guying System.
 - b. Decorations for Generations, Inc.; Mega Stake System.

2.13 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.

2.14 PLANTING SOIL MIX

- A. Planting soil is defined as soil to be used at open planting areas greater than 100 square feet in surface area or above ground raised planters.
- B. Furnish planting soil consisting of partially decomposed vegetable matter of natural occurrence; black, clean, low in content of mineral or woody material, mildly acid, fertile and friable. Mix with one (1) part of peat to five (5) parts of soil.
- C. Dispose of soil excavated from planting hole that is determined not to be of quality required or is not needed to be used for planting soil.

PART 3 - EXECUTION

3.01 COMMENCEMENT DATE

- A. At the earliest possible date site conditions permit.

3.02 EXAMINATION

- A. Examine areas to receive exterior plants for compliance with requirements and conditions affecting installation and performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, and lawns and existing exterior plants from damage caused by planting operations.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Stake out on the ground the location of all plantings and obtain approval of the Landscape Architect before excavation is begun.
- D. Lay out exterior plants at locations directed by Landscape Architect. Stake locations of individual trees and shrubs and outline areas for multiple plantings.
- E. Relocate incorrectly located plants at no expense to the Owner.
- F. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks, branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
 - 1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.

3.04 PLANTING BED ESTABLISHMENT

- A. Loosen subgrade of planting beds to a minimum depth of 8 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Apply fertilizer directly to subgrade before loosening.
 - 2. Spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil mix.
 - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - b. Mix lime with dry soil before mixing fertilizer.
 - 3. Spread planting soil mix to a depth of 8 inches but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
 - a. Spread approximately one-half the thickness of planting soil mix over loosened subgrade. Mix thoroughly into top 2 inches of subgrade. Spread remainder of planting soil mix.

- B. Finish Grading: Grade planting beds to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- C. Restore planting beds if eroded or otherwise disturbed after finish grading and before planting.

3.05 TREE AND SHRUB EXCAVATION

- A. Pits and Trenches: Excavate the plant pit, centered at the stake locations. Excavate circular pits with sides sloped inward. Trim base leaving center area raised slightly to support root ball and assist in drainage. Do not further disturb base. Scarify sides of plant pit smeared or smoothed during excavation.
 - 1. Excavate a pit at least twice the diameter of the root ball diameter for balled and burlapped or containerized stock.
 - 2. If drain tile is shown or required under planted areas, excavate to top of porous backfill over tile.
- B. Subsoil removed from excavations may be used as backfill.
- C. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
 - 1. Hardpan Layer: Drill 6-inch diameter holes, 24 inches apart, into free-draining strata or to a depth of 10 feet, whichever is less, and backfill with free-draining material.
- D. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

3.06 DRAINAGE TEST

- A. Randomly select a representative number of shrub plant pits in each shrub planting area and test for drainage prior to planting.
- B. Test all tree plant pits for drainage.
- C. Fill each selected plant pit with water and let stand for twenty-four (24) hours.
- D. Do not proceed with planting where drainage problems are apparent.
- E. Report to the Landscape Architect areas which do not fully drain within twenty-four (24) hours.

3.07 FERTILIZING B&B AND CONTAINER GROWN PLANTS

- A. Trees and Shrubs: Mix with backfill.
- B. Overstory Trees: Two (2) pounds per inch of caliper.
- C. Understory Trees: One (1) pound per inch of caliper.
- D. Shrubs: One-quarter (1/4) pound per foot height.
- E. Perennials and Grasses: One-eighth (1/8) pound per plant.

3.08 FERTILIZING MACHINE MOVED PLANTS

- A. Plants moved with tree spade: Spread ten (10) pounds Milorganite or equal in plant pit prior to planting.
- B. Plants moved with tree mover: Spread fifty (50) pounds Milorganite or equal in plant pit prior to planting.

3.09 TREE AND SHRUB PLANTING

- A. Set balled and burlapped and container grown stock plumb and in center of pit or trench with top of root ball even with the adjacent finish grades.
 - 1. Cut cord or wire securing burlap at base of B&B plant and remove burlap from top half of root ball. Remove all excess soil on top of the ball, just exposing the root flare.
 - 2. Remove container from container grown plant and "butterfly" bottom of root ball to expose healthy white roots.
 - 3. Make sure the plant is straight before backfilling. Backfill the plant hole with planting soil placed in layers around the root ball.

4. Carefully tamp each layer in place in a manner to avoid injury to roots or ball.
5. When approximately two-thirds (2/3) of the plant hole, has been backfilled, fill the hole with water and allow the soil to settle around the roots.
6. Set top of root ball 1" above the surrounding grade as shown in the Planting Details.
7. Place mulch as indicated in the Landscape Details.

3.10 TREE AND SHRUB PRUNING

- A. Prune, thin, and shape trees and shrubs as directed by Landscape Architect.
- B. Prune, thin, and shape trees and shrubs according to standard horticultural practice. Prune trees to retain required height and spread. Unless otherwise indicated by Landscape Architect, do not cut tree leaders; remove only injured or dead branches from flowering trees. Prune shrubs to retain natural character. Shrub sizes indicated are sizes after pruning.

3.11 GUYING AND STAKING

- A. Upright Staking and Tying: Stake trees of 2- through 5-inch caliper. Stake trees of less than 2-inch caliper only as required to prevent wind tip-out. Use a minimum of 2 stakes of length required to penetrate at least 18 inches below bottom of backfilled excavation and to extend at least 72 inches above grade. Set vertical stakes and space to avoid penetrating root balls or root masses. Support trees with two strands of tie wire encased in hose sections at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree. Use the number of stakes as follows:
 1. Use 2 stakes for trees up to 12 feet (3.6 m) high and 2-1/2 inches (63 mm) or less in caliper; 3 stakes for trees less than 14 feet (4.2 m) high and up to 4 inches (100 mm) in caliper. Space stakes equally around trees.
- B. Guying and Staking: Guy and stake trees exceeding 14 feet (4.2 m) in height and more than 3 inches (75 mm) in caliper, unless otherwise indicated. Securely attach no fewer than 3 guys to stakes 30 inches (760 mm) long, driven to grade.
 1. For trees more than 6 inches (150 mm) in caliper, anchor guys to pressure-preservative-treated deadmen 8 inches (200 mm) in diameter and 48 inches (1200 mm) long buried at least 36 inches (900 mm) below grade. Provide turnbuckles for each guy wire and tighten securely.
 2. Attach flags to each guy wire, 30 inches (760 mm) above finish grade.
 3. Paint turnbuckles with luminescent white paint.

3.12 GROUND COVER AND PLANT PLANTING

- A. Set out and space ground cover and plants as indicated on Plant Schedule.
- B. Dig holes large enough to allow spreading of roots, and backfill with planting soil.
- C. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- D. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- E. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

3.13 PLANTING BED MULCHING

- A. Mulch backfilled surfaces of planting beds and other areas indicated.
 1. Install at consistent depths as shown on the drawings.
 2. Sub-grade surface of areas to receive mulch shall be sloped to drain, smooth and free of ruts and clods.

3.14 CLEANUP AND PROTECTION

- A. During exterior planting, keep adjacent pavings and construction clean and work area in an orderly condition.
- B. Protect exterior plants from damage due to landscape operations, operations by other contractors and trades, and others. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged exterior planting.

3.15 DISPOSAL

- A. Disposal: Remove surplus soil and waste material, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 32 9200
SEEDING AND SODDING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This section covers the furnishing of all labor, equipment, tools, and materials necessary for the performance of seeding and sodding operations as required by the project plans and specifications.
- B. The seeding work shall consist of furnishing and drilling in or sowing seed by an experienced seeding contractor having approved equipment manufactured expressly for the purpose, such as a seed drill, mulch chopper and blower for the application of hay or straw mulch, mulch puncher or straight serrated disc for punching mulch into soil and a cultipacker that may be used for final compaction. The contractor may also use a hydroseeder as an alternative seeding method.
- C. Sod shall be required where areas are disturbed by construction within the right-of-way in established yards or as directed by the City Engineer.
- D. Sod work shall be performed by a Contractor experienced in placing sod.

1.02 REFERENCE STANDARDS

- A. Finish Grade: Elevation of finished surface of planting soil.
- B. Manufactured Soil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- C. Planting Soil: Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
- D. Subgrade: Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath planting soil.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate installation with work of other trades.

1.04 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Certification of each seed mixture for turfgrass sod identifying source, including name and telephone number of supplier.
- C. Product Certificates: For soil amendments and fertilizers, signed by product manufacturer.
- D. Qualification Data: For landscape Installer.
- E. Material Test Reports: For existing surface soil and imported topsoil.
- F. Planting Schedule: Indicating anticipated planting dates for each type of planting.
- G. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of lawns and native grasses during a calendar year. Submit before expiration of required maintenance periods.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape installer whose work has resulted in successful lawn establishment.
 - 1. Sod work shall be performed by a Contractor experienced in placing sod.

2. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when planting is in progress.
 - B. Soil-Testing Laboratory Qualifications: An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
 - C. Topsoil Analysis: Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; sodium absorption ratio; deleterious material; pH; and mineral and plant-nutrient content of topsoil.
 1. Report suitability of topsoil for lawn growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce a satisfactory topsoil.
 - D. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."
- 1.06 DELIVERY, STORAGE, AND HANDLING
- A. Seed: Deliver seed in original sealed, labeled, and undamaged containers.
 - B. Sod: Harvest, deliver, store, and handle sod according to requirements in TPI's "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in its "Guideline Specifications to Turfgrass Sodding."
- 1.07 SCHEDULING
- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
 1. Seeding and Fertilizing
 - a. Spring Planting: November 15 to June 1
 - b. Fall Planting: August 15 to October 15
 2. Sodding
 - a. Spring Planting: March 15 to June 15
 - b. Fall Planting: September 15 to October 15
 - B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit.
 1. Seeding and fertilizing shall not be done during periods of such severe drought, high winds, or excessive moisture, as determined by the Landscape Architect, that satisfactory results are not likely to be obtained.
 2. Sod shall not be placed on frozen ground.
 - C. Any seeding or sodding to be performed during periods other than those previously designated will require a written request to extend the permissible period for performing such work. The Contractor shall explain the reason for the variance and shall include a guarantee of satisfactory results at the end of the first four (4) weeks of the following growing season as previously defined. The Contractor shall agree to perform any necessary re-seeding or re-sodding at that time. The request shall be initiated by the Contractor and submitted to the City Engineer for consideration for approval.
- 1.08 LAWN MAINTENANCE
- A. All seeded areas shall be protected against damage by vehicle and pedestrian traffic by the use of barriers and appropriate warning signs. If at any time before completion and acceptance of the seeding work any portion of the seeded area becomes eroded or otherwise damaged, such damaged areas shall be repaired by filling with soil to original grade, re-seeding and re-mulching. All costs of repair work shall be borne by the Contractor.
 - B. Begin maintenance immediately after each area is planted and continue until acceptable lawn is established, but for not less than the following periods:
 1. Seeded Lawns: Thirty-five (35) days from date of Substantial Completion.
 - a. When full maintenance period has not elapsed before end of planting season, or if lawn is not fully established, continue maintenance during next planting season.
 - b. Sprinkling of the seeded areas shall be carefully done in such manner as to avoid standing water, surface wash, scour or other erosion.

- 2. Sodded Lawns: Thirty-five (35) days from date of Substantial Completion.
 - a. All sodded areas shall be thoroughly watered twice daily for a period of twenty-one days (21) after placing, except when thoroughly wetted by rain of 1/4-inch (1/4") or more in a 24-hour period.
- C. Maintain and establish lawn by watering, fertilizing, weeding, mowing, trimming, replanting, and other operations. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth lawn.
 - 1. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch. Anchor as required to prevent displacement.
- D. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources and to keep lawn uniformly moist to a depth of 4 inches (100 mm).
 - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
 - 2. Water lawn at a minimum rate of 1 inch (25 mm) per week.
- E. Mow lawn as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 40 percent of grass height. Remove no more than 40 percent of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
 - 1. Mow grass 1-1/2 to 2 inches (38 to 50 mm) high.
 - 2. Mow grass 2 to 3 inches (50 to 75 mm) high.
- F. Lawn Postfertilization: Apply fertilizer after initial mowing and when grass is dry.
 - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to lawn area.

PART 2 - PRODUCTS

2.01 SEED

- A. Seeds for cover crops shall be the kind and mixture of seeds specified herein. Seeds shall be free of prohibited weed seeds and shall not have more than 1 percent (1%) noxious weed seeds. Seeds shall be delivered to the site in labeled containers bearing the name of the producer. A certificate showing the percentage of the purity and germination of each kind of seed specified shall be submitted to the City Engineer for approval.
- B. The following formula shall be used to determine the amount of commercial seed required:
 - 1. $\text{Pounds of Commercial Seed Required} = 10,000 \times \frac{\text{Rate of Pure Live Seeds (lbs/acre)}}{\text{Purity \%} \times \text{Germination \%}}$
- C. Where seeding is required in areas of established yards, shoulders, slopes, (in street right-of-way), median islands, and any other areas where a high-quality seeding is deemed necessary, the seed mixture will be as follows:

KIND OF SEED	MINIMUM PURE LIVE SEED (%)	RATE OF PURE LIVE SEED POUNDS/ACRE
Turf-type Tall Fescue (Rebel II or equivalent)	80%	300
		Total 300 lbs/Acre

- D. Where seeding is required in areas off street right-of-way that are not maintained periodically, the seed mixture will be as follows:

KIND OF SEED	MINIMUM PURE LIVE SEED (%)	RATE OF PURE LIVE SEED POUNDS/ACRE
Alta Fescue or Kentucky 31 Fescue (Festuca Elatior) Var. Arundinaces)	75%	140 lbs.
		Total 140 lbs./Acre

2.02 TURFGRASS SOD

- A. Turfgrass Sod: The sod shall be densely-rooted Turf Type Tall Fescue. Kentucky bluegrass sod may be used if matching sod on a specific property. The sod shall contain a growth of not more than 10 percent (10%) of other grasses and clovers, shall be free from all prohibited and noxious weeds, and shall be three-fourths inch (3/4") to one and one-fourth inch (1-1/4") thick; each strip containing at least one (1) square yard. Sod shall be cut in strips not less than twelve inches (12") wide. Sod placed in existing yards shall match the type in place.

2.03 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth.
1. Topsoil Source: Reuse surface soil stockpiled on-site. Verify suitability of stockpiled surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Supplement with imported or manufactured topsoil from off-site sources when quantities are insufficient. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.
 2. Topsoil Source: Import topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.
 3. Topsoil Source: Amend existing in-place surface soil to produce topsoil. Verify suitability of surface soil to produce topsoil. Clean surface soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - a. Surface soil may be supplemented with imported or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches (100 mm) deep; do not obtain from agricultural land, bogs or marshes.

2.04 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent and as follows:
1. Class: Class T, with a minimum 99 percent passing through No. 8 (2.36-mm) sieve and a minimum 75 percent passing through No. 60 (0.25-mm) sieve.
 2. Provide lime in form of dolomitic limestone.
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 (3.35-mm) sieve and a maximum 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Finely ground, containing a minimum of 90 percent calcium sulfate.
- G. Sand: Clean, washed, natural or manufactured, free of toxic materials.

- H. Diatomaceous Earth: Calcined, diatomaceous earth, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
 - I. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.
- 2.05 ORGANIC SOIL AMENDMENTS
- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.
 - B. Peat: Sphagnum peat moss, partially decomposed, finely divided or granular texture, with a pH range of 3.4 to 4.8.
 - C. Peat: Finely divided or granular texture, with a pH range of 6 to 7.5, containing partially decomposed moss peat, native peat, or reed-sedge peat and having a water-absorbing capacity of 1100 to 2000 percent.
 - D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture, free of chips, stones, sticks, soil, or toxic materials.
 - 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with at least 0.15 lb (2.4 kg) of ammonium nitrate or 0.25 lb (4 kg) of ammonium sulfate per cubic foot (cubic meter) of loose sawdust or ground bark.
 - E. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.
- 2.06 PLANTING ACCESSORIES
- A. Selective Herbicides: EPA registered and approved, of type recommended by manufacturer for application.
- 2.07 FERTILIZER
- A. Commercial fertilizer for seeded or sodded areas shall contain 12 percent (12% by weight) nitrogen, 12 percent (12% by weight) phosphoric acid, and 12 percent (12% by weight) potash. It shall be uniform in composition, free flowing, and delivered to the site in standard size bags, showing weight, analysis, and name of manufacturer. It shall be stored until use in a weatherproof storage place in such a manner that it will be kept dry and its effectiveness will not be impaired
- 2.08 MULCHES
- A. Preferred mulch materials for application to seedbed areas are smooth brome grass hay, Sudan grass hay or prairie hay. Prairie hay shall consist chiefly of bluestem grasses, switchgrass, Indian grass and other desirable native perennial grasses. Mulch shall be free of prohibited and noxious weed seeds. Other mulching materials may be used with the approval of the Landscape Architect.
- 2.09 EROSION-CONTROL MATERIALS
- A. Erosion-Control Blankets: Biodegradable wood excelsior, straw, or coconut-fiber mat enclosed in a photodegradable plastic mesh. Include manufacturer's recommended steel wire staples, 6 inches (150 mm) long.
 - B. Erosion-Control Fiber Mesh: Biodegradable twisted jute or spun-coir mesh, a minimum of 0.92 lb/sq. yd. (0.5 kg/sq. m), with 50 to 65 percent open area. Include manufacturer's recommended steel wire staples, 6 inches (150 mm) long.

PART 3 - EXECUTION**3.01 EXAMINATION**

- A. Examine areas to receive lawns and grass for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect adjacent and adjoining areas from hydroseeding overspray.
- B. Provide erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.03 SEEDING

- A. The area to be seeded shall be thoroughly tilled to a depth of at least three inches (3") by discing, harrowing or other approved methods until the soil is well pulverized. After completion of the tilling operation, the surface shall be cleared of all stones, stumps, or other objects larger than 1-1/2 inches (1-1/2") in diameter, and of roots, wire, grade stakes, and other objects that might be a hindrance to maintenance operations. Areas tilled shall then be brought to the desired line and grade and maintained until seeding and mulching is complete to ensure a smooth area with no gullies or depressions.
- B. Any objectionable undulations or irregularities in the surface resulting from tilling or other operations shall be removed before planting operations have begun. Seed bed preparation shall be performed only during periods when satisfactory results are likely to be obtained. When results are not satisfactory because of drought, excessive moisture or other causes, the work shall be stopped until such conditions have been corrected to the satisfaction of the City Engineer.
- C. Seeding may be accomplished by means of approved mechanical seed drills followed by packer wheels, or by broadcast-type seeders or hydraulic type seeders in small areas not accessible to machine methods, or as approved by the City Engineer. Seed drills shall have depth bands set to maintain a planting depth of at least one-quarter inch (1/4") but not to exceed one-half inch (1/2"). All seed sown by broadcast-type seeders shall be "raked in" or otherwise covered with soil to a depth of at least one-quarter inch (1/4") and rolled to obtain a firm seed bed. Water shall be applied when necessary.
 - 1. Do not use wet seed or seed that is moldy or otherwise damaged.
- D. Hydraulic seeding equipment shall include a pump capable of being operated at 100 gallons per minute and at 100 pounds per square inch pressure, unless otherwise directed. The equipment shall have an acceptable gauge and a nozzle adaptable to hydraulic seeding requirements. Storage tanks shall have a means of agitation and a means of estimation of the volume used, or remaining in the tank.
- E. Seed shall not be drilled or sown during windy weather or when the ground is frozen or otherwise untillable. When a seed drill is used, it shall be set to space the rows not more than 4 inches (4") apart.
- F. Sow seed at the rate outlining under the 'Products' section of this specification.
- G. Rake seed lightly into top 1/8 inch (3 mm) of topsoil, roll lightly, and water with fine spray.
- H. Protect seeded areas with slopes exceeding 1:6 with erosion-control fiber mesh and 1:4 with erosion-control blankets installed and stapled according to manufacturer's written instructions.
- I. Protect seeded areas with slopes not exceeding 1:6 by spreading straw mulch. Spread uniformly at a minimum rate of 2 tons/acre (42 kg/92.9 sq. m) to form a continuous blanket 1-1/2 inches (38 mm) in loose depth over seeded areas. Spread by hand, blower, or other suitable equipment.
 - 1. Anchor straw mulch by crimping into topsoil with suitable mechanical equipment.
 - 2. Bond straw mulch by spraying with asphalt emulsion at the rate of 10 to 13 gal./1000 sq. ft. (38 to 49 L/92.9 sq. m). Take precautions to prevent damage or staining of structures or other plantings adjacent to mulched areas. Immediately clean damaged or stained areas.

- J. Protect seeded areas from hot, dry weather or drying winds by applying compost mulch within 24 hours after completing seeding operations. Soak and scatter uniformly to a depth of 3/16 inch (4.8 mm) and roll to a smooth surface.
 - K. Limit lawn subgrade preparation to areas to be planted.
 - L. Restore areas if eroded or otherwise disturbed after finish grading and before planting.
- 3.04 MULCHING
- A. Hay mulch shall be applied uniformly to seeded areas at the rate of not less than two (2) tons per acre. Baled hay shall be broken up and loosened sufficiently before being fed into the blower hopper to avoid the placing of matted or unbroken clumps. The use of wet hay is prohibited.
 - B. Mulching shall be performed within twenty-four (24) hours after seeding, but not be done during windy or rainy weather or when such weather is imminent. Mulching shall be started at the windward side of relatively flat areas, or at the upper part of steep slopes and shall continue uniformly until each area is covered.
 - C. The mulching material shall be disced or punched into the soil so that it is partially covered. Several passes may be required, if a straight disc is used, in order to mix the mulching material with the topsoil sufficiently to ensure protection from erosion by either wind or water. The mulch tilling operation shall be performed parallel to the ground contours.
- 3.05 FERTILIZING
- A. Once the seed has been installed, the contractor shall apply fertilizer at ½ lb. to 1 lb of nitrogen per 1000 square feet of area. Do Not incorporate fertilizer into the prepared seed bed.
- 3.06 SODDING
- A. The sod bed shall have a uniform surface free from washes and depressions and shall conform to the finished grade profile or cross section shown on the plans. The soil shall be thoroughly tilled to a depth of two inches (8") with 4" of freshly placed topsoil on top to meet desired finished grade. Soils are to be tested as stated above and amended as necessary to meet recommended levels specified by the testing facility. Areas which have become dry and crusted over, shall be tilled as specified above, prior to placing the sod. The Contractor must have the prepared sod bed inspected and approved by the City Engineer prior to any sod being placed. Any sod placed prior to the sod bed being inspected and approved by the City Engineer is subject to being removed, the deficiencies corrected, and the sod replaced at the Contractor's expense.
 - B. The sod beds shall be in a firm but not too compacted condition with relatively fine texture at the time of sodding. Sod shall be moist when it is placed. The use of dry sod will not be permitted. Sod strips shall be laid along contour lines by hand, commencing at the lowest point of the area and working upward. The transverse joints of sod strips shall be staggered and the sod carefully placed to reduce tight joints. The sod shall be firmed immediately after it is placed. The "firming" shall be accomplished by application of a roller weighing not less than sixty (60) nor more than ninety (90) pounds per linear foot of roller. On steep slopes, the sod may be firmed by compacting with hand shovels. The firming process shall pack the sod roots firmly into the prepared soil. Do Not water and then roll the sod or firm the sod.
 - C. Sod shall be transplanted within twenty-four (24) hours from the time it is harvested. All sod in stacks shall be kept moist and protected from exposure to the sun and from freezing.
 - D. Do not lay sod if dormant or if ground is frozen or muddy.
 - E. Sod placed next to existing grassy areas, curbs, sidewalks or like boundaries shall be placed to match existing grades.
 - F. Anchor sod on slopes exceeding 1:6 with steel staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage
 - G. The Contractor shall water installed sod immediately after installing and shall water all sod twice daily for a minimum of twenty-one (21) days from initial placement, except on those days where a minimum of 1/4 inch (1/4") of rain falls in a twenty-four hour period.

3.07 LAWN RENOVATION

- H. Renovate existing lawn.
- B. Renovate existing lawn damaged by Contractor's operations, such as storage of materials or equipment and movement of vehicles.
 - 1. Reestablish lawn where settlement or washouts occur or where minor regrading is required.
- C. Remove sod and vegetation from diseased or unsatisfactory lawn areas; do not bury in soil.
- D. Remove topsoil containing foreign materials resulting from Contractor's operations, including oil drippings, fuel spills, stone, gravel, and other construction materials, and replace with new topsoil.
- E. Mow, dethatch, core aerate, and rake existing lawn.
- F. Remove weeds before seeding. Where weeds are extensive, apply selective herbicides as required. Do not use pre-emergence herbicides.
- G. Remove waste and foreign materials, including weeds, soil cores, grass, vegetation, and turf, and legally dispose of them off Owner's property.
- H. Till stripped, bare, and compacted areas thoroughly to a soil depth of 6 inches (150 mm).
- I. Apply soil amendments and initial fertilizers required for establishing new lawns and mix thoroughly into top 4 inches (100 mm) of existing soil. Provide new planting soil to fill low spots and meet finish grades.
- J. Apply sod as required for new lawns.
- K. Water newly planted areas and keep moist until new lawn is established.

3.08 SATISFACTORY LAWNS

- L. Satisfactory Seeded Lawn: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 70 percent over any 10 sq. ft. (0.92 sq. m) and bare spots not exceeding 5 by 5 inches (125 by 125 mm).
- B. Satisfactory Sodded Lawn: At end of maintenance period, a healthy, well-rooted, even-colored, viable lawn has been established, free of weeds, open joints, bare areas, and surface irregularities.
- C. Satisfactory Plugged Lawn: At end of maintenance period, the required number of plugs has been established as well-rooted, viable patches of grass; and areas between plugs are free of weeds and other undesirable vegetation.
- D. Satisfactory Sprigged Lawn: At end of maintenance period, the required number of sprigs has been established as well-rooted, viable plants; and areas between sprigs are free of weeds and other undesirable vegetation.
- E. Reestablish lawns that do not comply with requirements and continue maintenance until lawns are satisfactory.

3.09 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by lawn work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect barricades and warning signs as required to protect newly planted areas from traffic. Maintain barricades throughout maintenance period and remove after lawn is established.
- C. Remove erosion-control measures after grass establishment period.

3.10 GUARANTEE.

- A. The Contractor will be required to guarantee all sod installed on this project for twenty-one (21) days from the date of installation. After the twenty-one day period, the City Engineer will inspect all sod. Any sod that is dead at the end of the twenty-one day period shall be replaced by the Contractor at his expense and is subject to an additional twenty-one day warranty period. All healthy sod at the end of the twenty-one day period will be accepted by the City Engineer and turned over to the property owner for maintenance. The

Contractor is not required to guarantee any healthy sod accepted by the City Engineer after the twenty-one day period.

- B. Seeded areas will not be accepted until there is a minimum of 70% coverage of healthy grass.

3.11 RECORD KEEPING.

- A. The Contractor shall maintain a log of his watering operations and rain events to show compliance with the watering requirements for seeding and sodding. The Contractor shall submit the records to the City Engineer at the end of the required maintenance period. The seeded and/or sodded areas shall not be approved until the submittal has been received and reviewed by the City Engineer.

END OF SECTION

Date: 1 / 26 /2022

Conversation with: Celia Duran, PE, Public Works Director, City of Mission
Tim Burfeind, PE, SK Design Group

Project: Mohawk Park

Description: Telephone Conversation Summary – Stormwater Discussion

The purpose of the telephone conversation was to discuss the stormwater requirements for the proposed improvements and Mohawk Park.

Tim started the meeting by summarizing the email from Celia Duran dated 1/20/2022 (copied below):

From: Celia Duran <cduran@missionks.org>

Sent: Thursday, January 20, 2022 4:31 PM

To: Penn Almoney <palmoney@missionks.org>

Subject: Mohawk Park

Typically we require a full study but in this case please provide site map (existing and proposed) showing impervious vs. pervious area and runoff calculations for the 10-year and 100-year storm per APWA 5600. Attach a letter stating your conclusions. If the proposed runoff rates are negligible state this and request no detention/BMPs. Do you propose any BMPS?

Also, there are two areas on site that do not drain (northwest corner and middle of site where the structure is proposed to go). Please show improvements (grading or storm infrastructure) to address ponded water. The NW corner has an inlet that you may be able to tie into and you may be able to extend pipe from the middle area to a city inlet located south on 67th St. This can be addressed when you submit the building permit/site plan.

Please call me with any questions.

CELIA J. DURAN, P.E.

Tim indicated that SK Design prepared exhibits indicating the impervious areas for the park for the existing conditions, 2003 conditions, and the proposed conditions for various phases (attached for reference).

Tim indicated that the existing park is currently 16% impervious with about 1.25 acres of impervious surface.

In 2003 when the school still existed, the site was about 40% impervious with 3.15 acres of impervious surface.

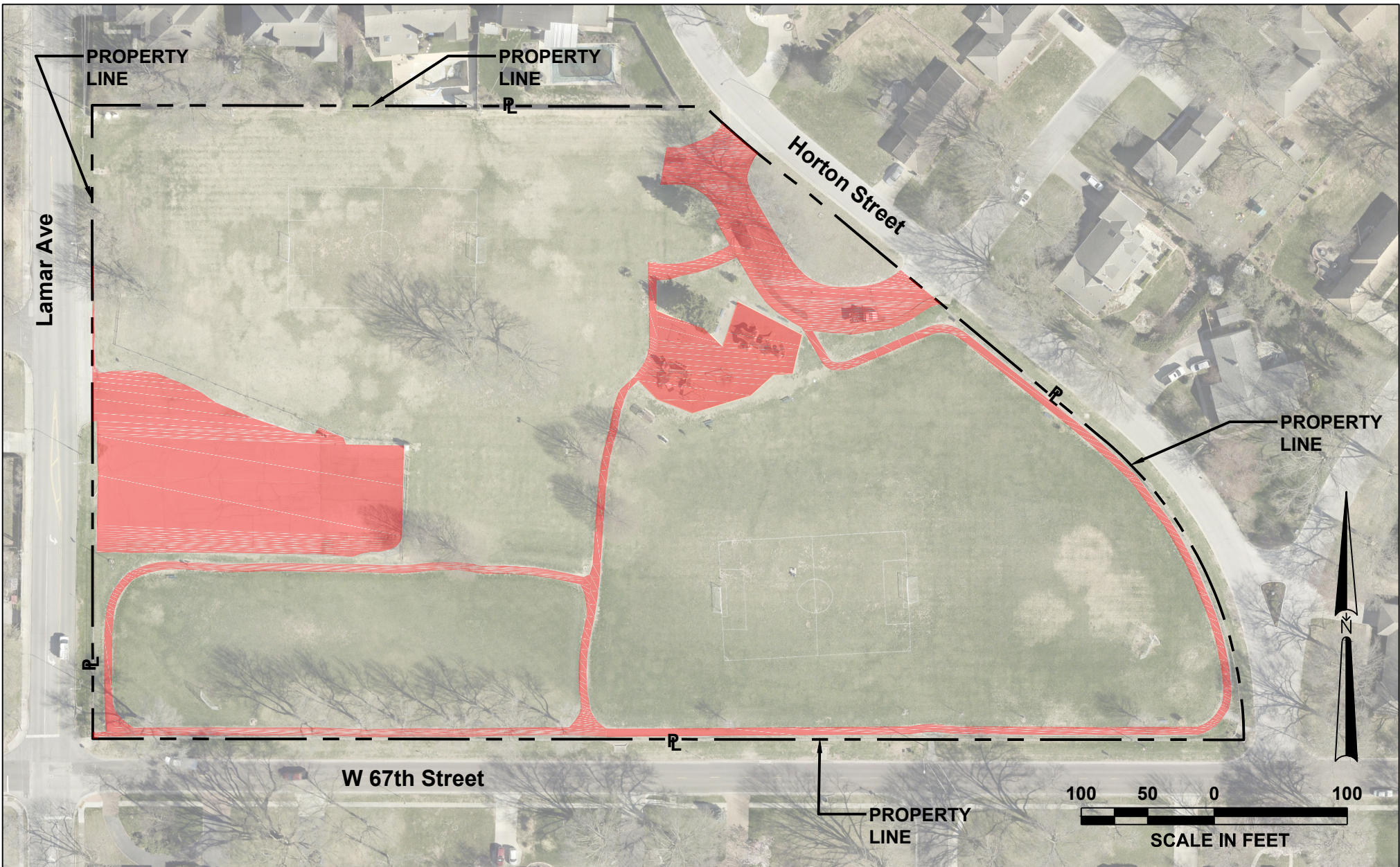
For the phase 1 improvements, the impervious area will increase from the current conditions by approximately 10,000 square feet to about 19% impervious.

Celia indicated that a stormwater study should be prepared for the site per the requirements of APWA 5600 that considers the current impervious conditions, the capacity of the downstream storm sewer system, and the flow generated from the proposed improvements. The study should make recommendations on the need for stormwater detention based on the analysis of those considerations.



Tim indicated that the project is still in the early stages of development and that SK Design will prepare the study after the site survey and the detailed site plans are complete.

SK Design will submit a draft study to Celia for review.



Property Area = 340,707 sf 7.82 acres
 Existing Impervious Area = 54,240 sf 1.25 acres 15.9%



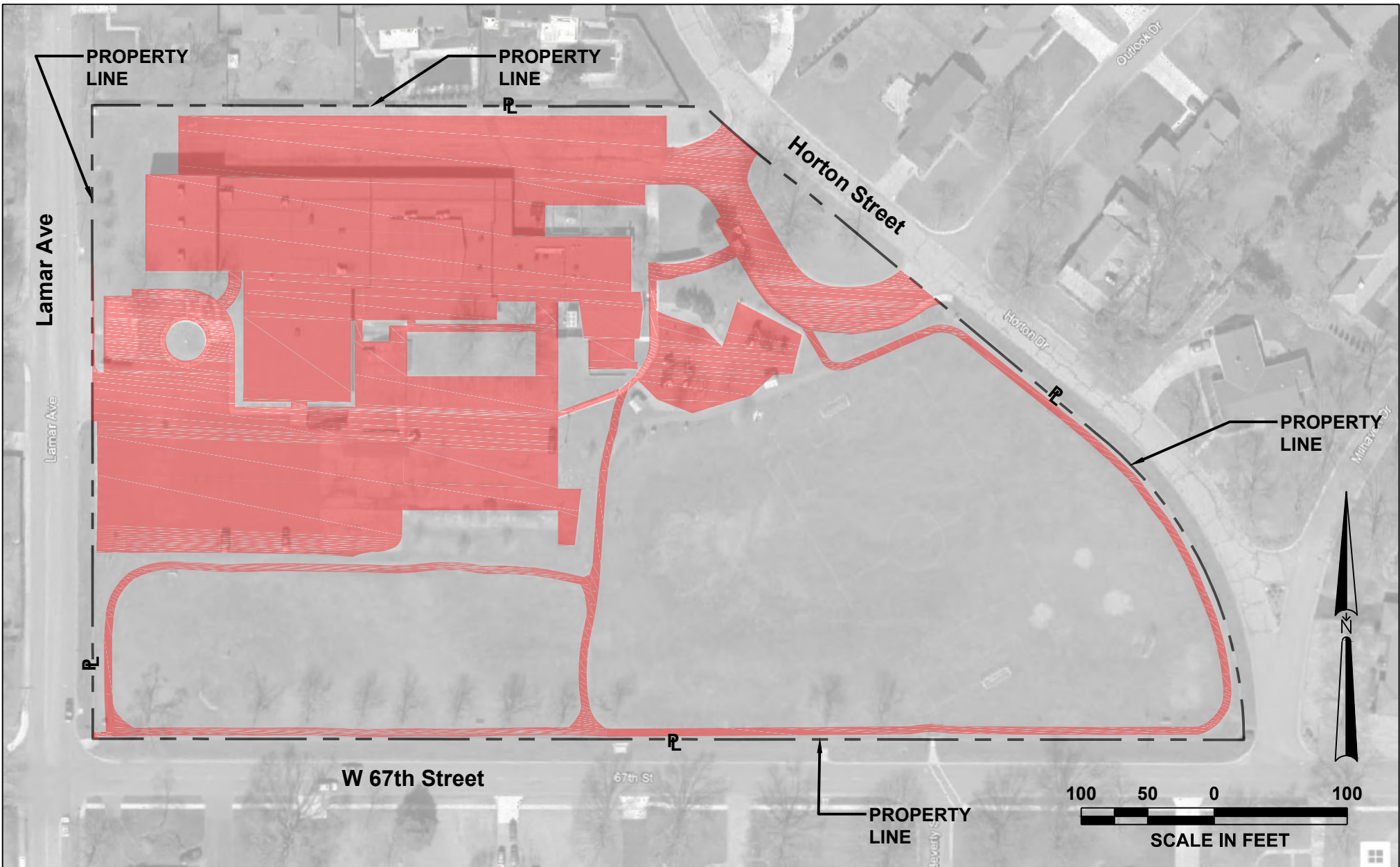
4600 College Boulevard,
 Suite 100
 Overland Park, Kansas 66211
 www.skdg.com
 Tel: 913-451-1818
 Fax: 913-451-7599

Existing Impervious Areas

Mohawk Park
 6649 Lamar Avenue, Mission, KS

EXHIBIT
1 of 6

January 2022



Property Area =	340,707 sf	7.82 acres	
2003 Impervious Area =	137,204 sf	3.15 acres	40.3%



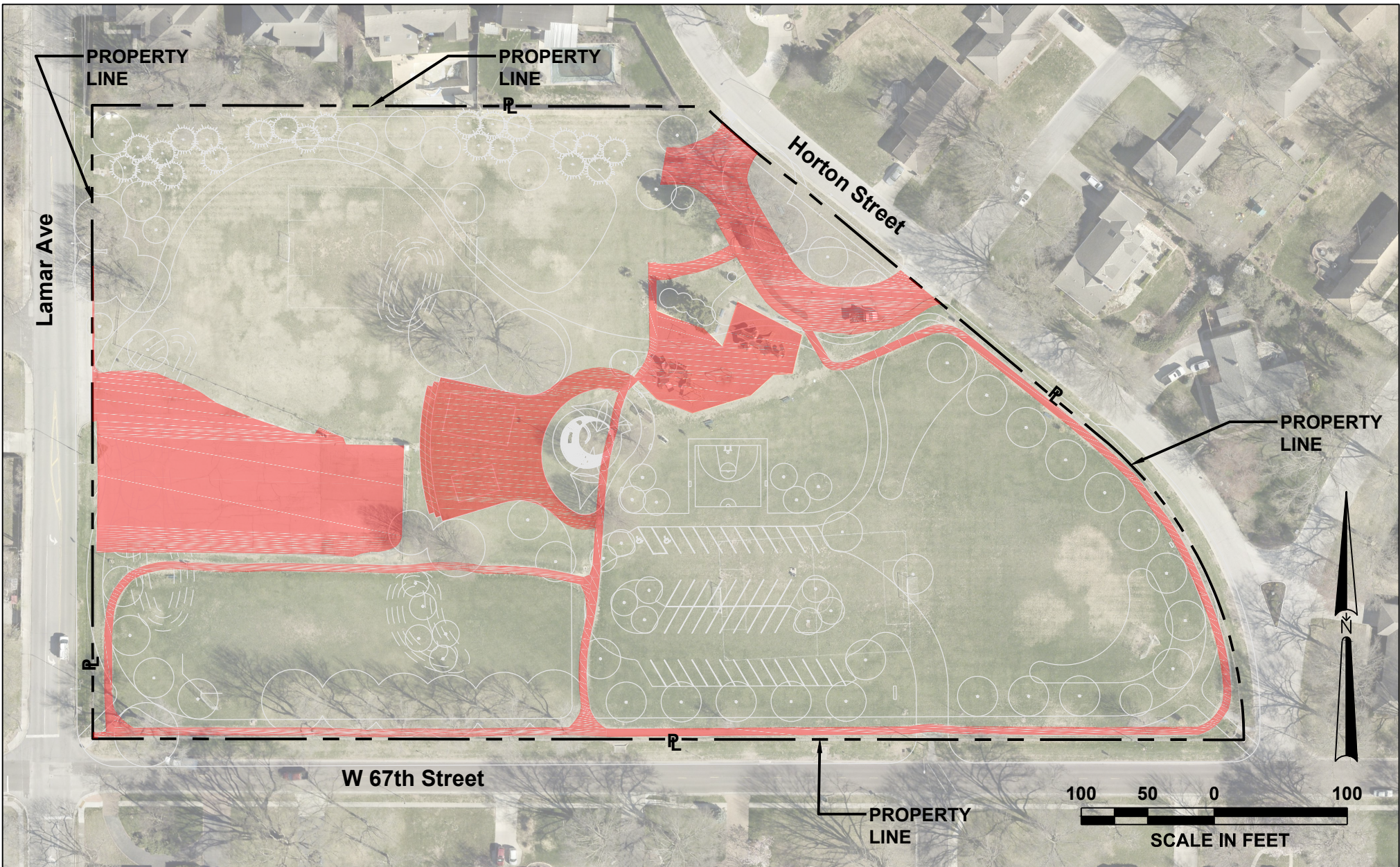
4600 College Boulevard,
Suite 100
Overland Park, Kansas 66211
www.skdg.com
Tel: 913-451-1818
Fax: 913-451-7599

2003 Impervious Areas

Mohawk Park
6649 Lamar Avenue, Mission, KS

EXHIBIT
2 of 6

January 2022



Property Area =	340,707 sf	7.82 acres				
Phase 1 Base Bid Impervious Area =	64,292 sf	1.48 acres	18.9%	10,052 sf increase vs. Exist.	72,912 sf decrease vs. 2003	



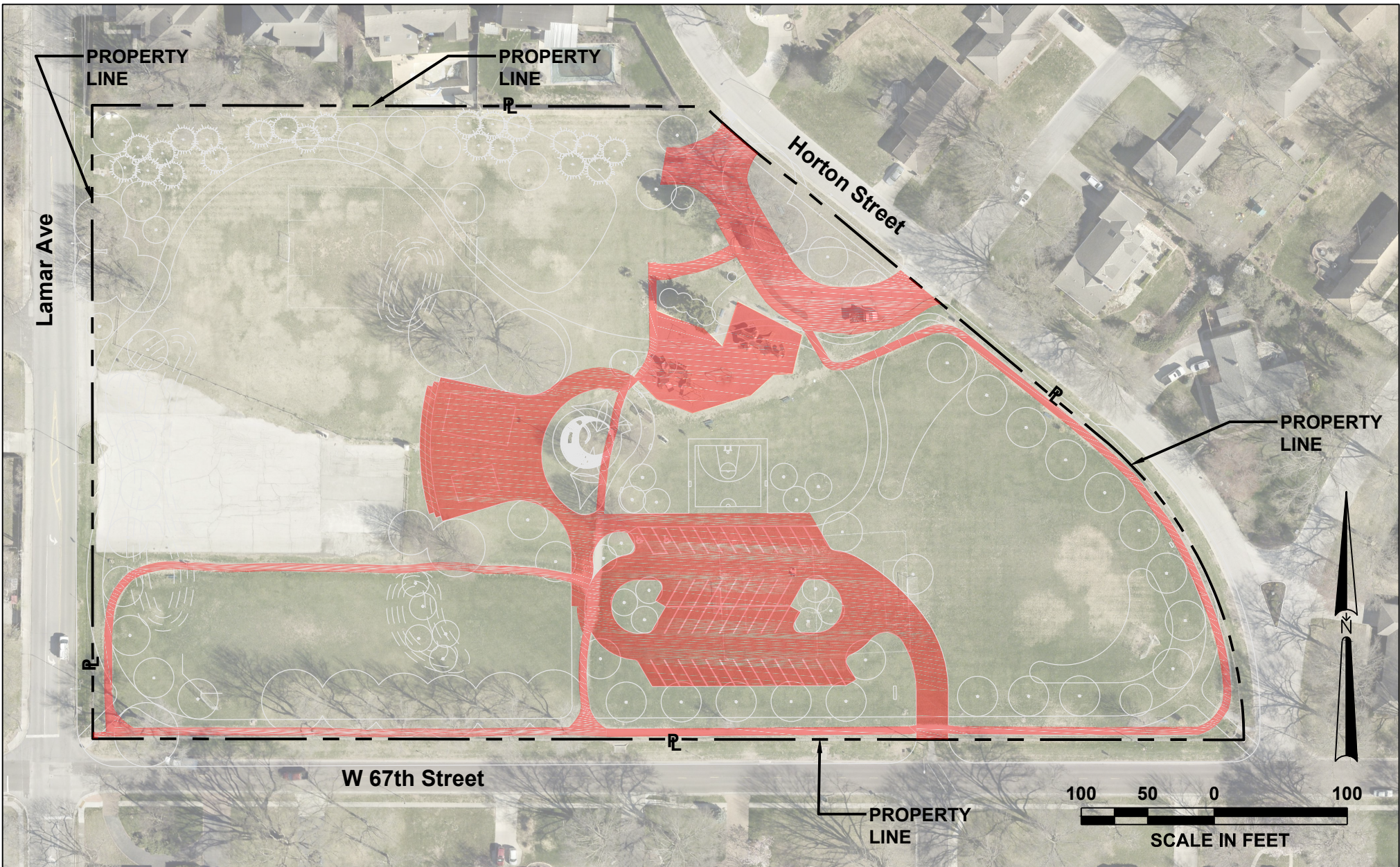
4600 College Boulevard,
Suite 100
Overland Park, Kansas 66211
www.skdg.com
Tel: 913-451-1818
Fax: 913-451-7599

Phase 1 Base Bid Impervious Areas

Mohawk Park
6649 Lamar Avenue, Mission, KS

EXHIBIT
3 of 6

January 2022



Property Area =	340,707 sf	7.82 acres			
Phase 1 Alternate Bid Impervious Area =	64,653 sf	1.48 acres	19.0%	10,413 sf increase vs. Exist.	72,551 sf decrease vs. 2003



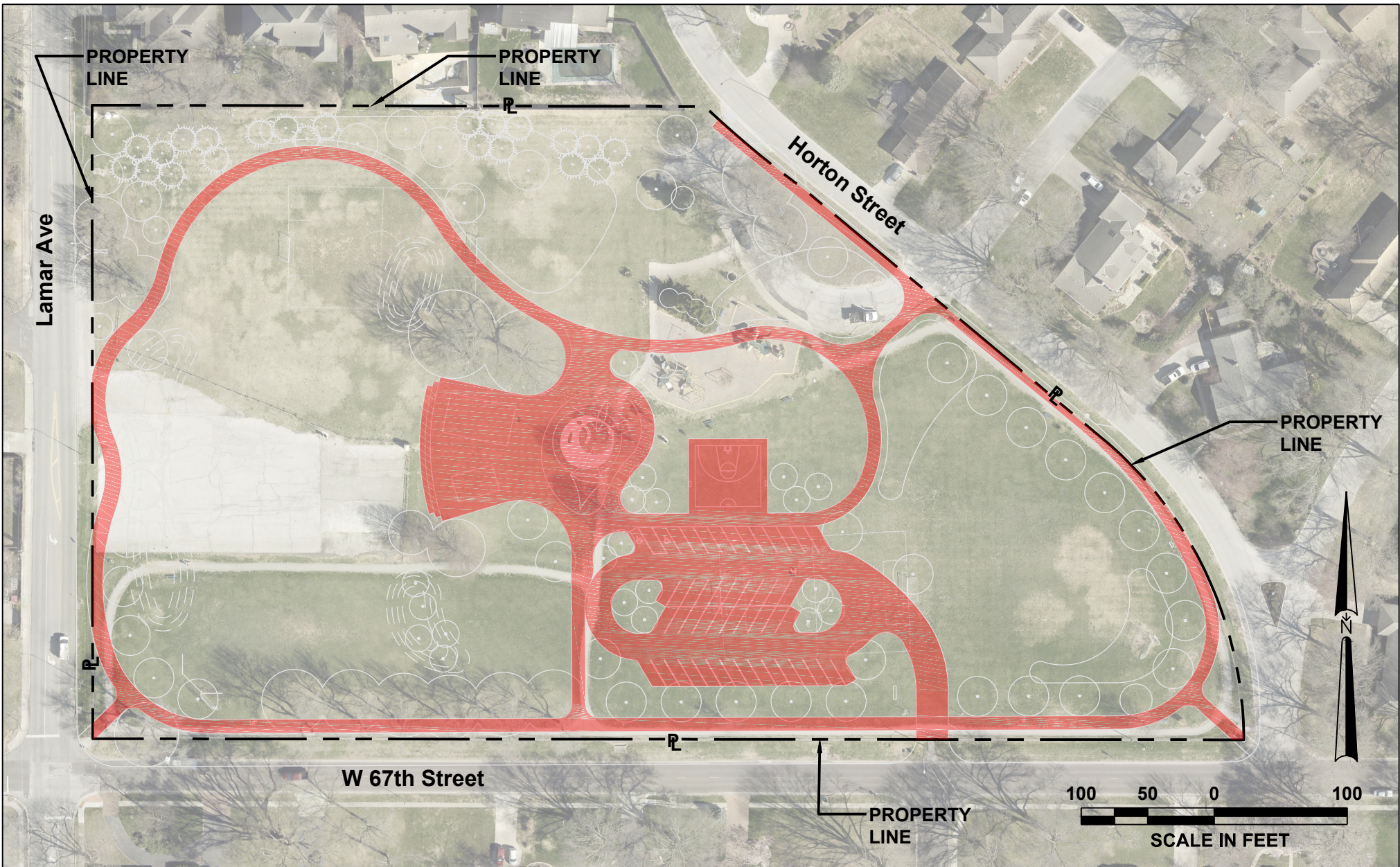
4600 College Boulevard,
 Suite 100
 Overland Park, Kansas 66211
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 Tel: 913-451-1818
 Fax: 913-451-7599

Phase 1 Alternate Bid Impervious Areas

Mohawk Park
 6649 Lamar Avenue, Mission, KS

EXHIBIT
4 of 6

January 2022



Property Area =	340,707 sf	7.82 acres				
Phase 2 Impervious Area =	72,922 sf	1.67 acres	21.4%	18,682 sf increase vs. Exist.	64,282 sf decrease vs. 2003	



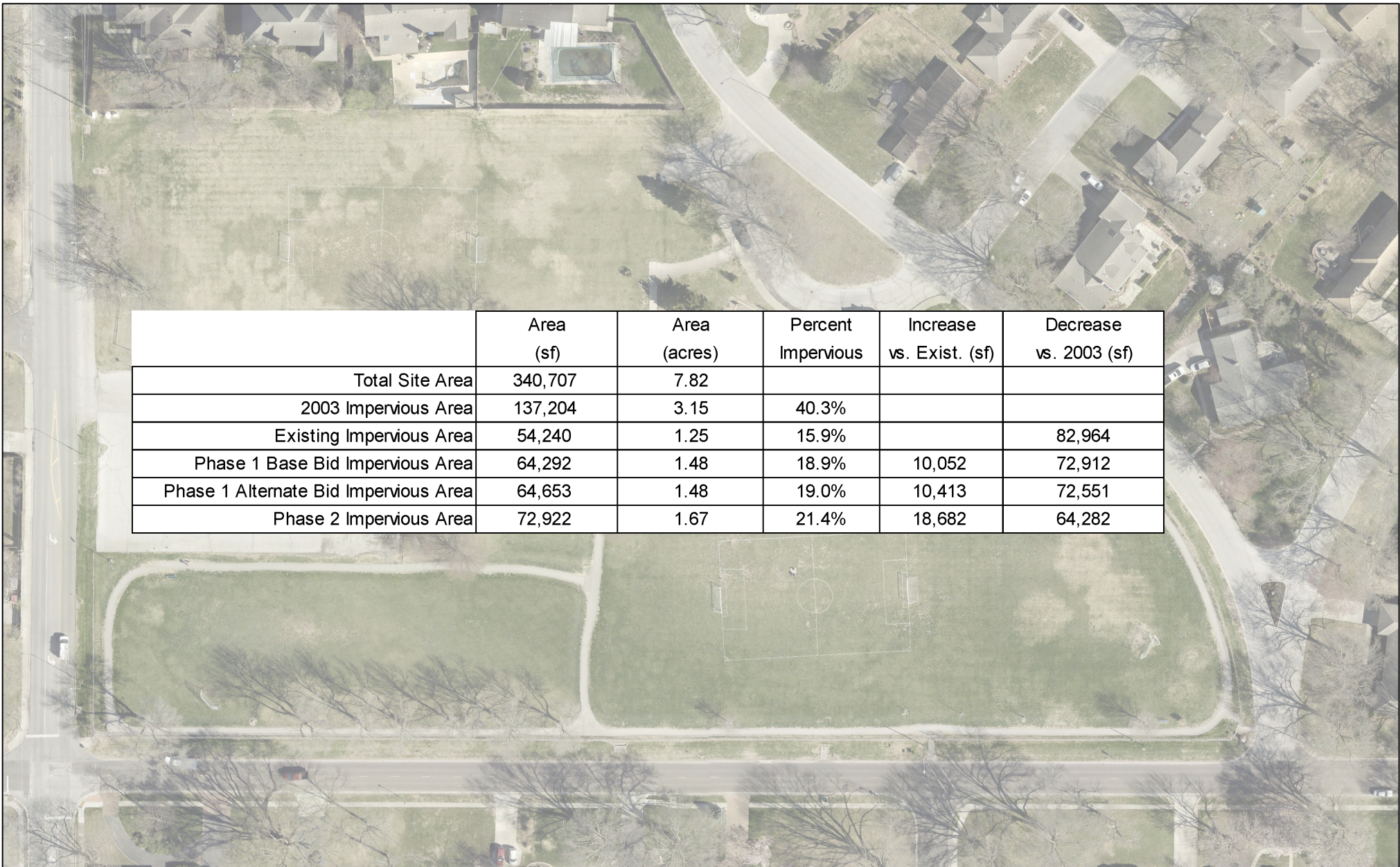
4600 College Boulevard,
Suite 100
Overland Park, Kansas 66211
www.skdg.com
Tel: 913-451-1818
Fax: 913-451-7599

Phase 2 Impervious Areas

Mohawk Park
6649 Lamar Avenue, Mission, KS

EXHIBIT
5 of 6

January 2022



	Area (sf)	Area (acres)	Percent Impervious	Increase vs. Exist. (sf)	Decrease vs. 2003 (sf)
Total Site Area	340,707	7.82			
2003 Impervious Area	137,204	3.15	40.3%		
Existing Impervious Area	54,240	1.25	15.9%		82,964
Phase 1 Base Bid Impervious Area	64,292	1.48	18.9%	10,052	72,912
Phase 1 Alternate Bid Impervious Area	64,653	1.48	19.0%	10,413	72,551
Phase 2 Impervious Area	72,922	1.67	21.4%	18,682	64,282



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Overland Park, Kansas 66211
www.skdg.com
Tel: 913-451-1818
Fax: 913-451-7599

Summary

Mohawk Park
6649 Lamar Avenue, Mission, KS

EXHIBIT
6 of 6

January 2022

MEMO

TO: Brad Burton - GBA DATE: 02/13/2024
PROJECT: Mohawk Park – Phase II Improvements PROJECT #: 23093
RE: Stormwater Drainage Study

Comments, additions or corrections to this memo should be communicated in writing to Confluence within seven (7) days of issuance. If no comments are received within that period, this memo will be assumed accurate and filed as part of the permanent record for this project.

NOTES:

Brad,

In response to the FDP comments received on 02/08/2024, please find the response below in regards to the calculations in the previously approved March 4, 2021 Storm Drainage Report.

Following review of the phase I improvement memo for the Mohawk Park and the proposed improvements for the second phase of Mohawk Park, we note that phase I improvements provided 9,200 square feet of impervious surface. This represented a 1.71 acre reduction of impervious surface from the original 2003 conditions on the site in its previous use as a school. Based on the proposed park improvements identified for the second phase of Mohawk Park, there is an additional 44,700 square feet of impervious surface being proposed equating to just over 1 acre of impervious area identified. These improvements are still .69 acres below the original school usage impervious surface. The original study identified that the existing downstream storm sewer that crosses 67th Street has the capacity to carry the 10 year runoff. Stormwater detention and Best Management Practices have not been included in the proposed site improvements in alignment with the original 2021 Drainage Study.

NAME: PJ Novick
Principal

Attachment:



	Previous Development	Phase 1		Phase 2	
		Removed	Added	Removed	Added
Impervious surface sq.ft.	129335 sq.ft.	108752 sq.ft.	35738 sq.ft.	20583 sq.ft.	44669 sq.ft.
Total	129,335 sq.ft.	56,321		80,407	
% of Decrease		Previous to Phase 1:	56.45%	Previous to Phase 2:	37.83%



MOHAWK PARK EXISTING CONDITIONS - IMPERVIOUS SURFACES

Mission, Kansas



CONFLUENCE

	Previous Development	Phase 1		Phase 2	
		Removed	Added	Removed	Added
Impervious surface sq.ft.	129335 sq.ft.	108752 sq.ft.	35738 sq.ft.	20583 sq.ft.	44669 sq.ft.
Total	129,335 sq.ft.	56,321		80,407	
% of Decrease		Previous to Phase 1:	56.45%	Previous to Phase 2:	37.83%



MOHAWK PARK PHASE 1 - IMPERVIOUS SURFACES

Mission, Kansas



CONFLUENCE

	Previous Development	Phase 1		Phase 2	
		Removed	Added	Removed	Added
Impervious surface sq.ft.	129335 sq.ft.	108752 sq.ft.	35738 sq.ft.	20583 sq.ft.	44669 sq.ft.
Total	129,335 sq.ft.	56,321		80,407	
% of Decrease		Previous to Phase 1: 56.45%		Previous to Phase 2: 37.83%	



MOHAWK PARK PHASE 2 - IMPERVIOUS SURFACES

Mission, Kansas



CONFLUENCE

**MOHAWK PARK PHASE 2
6649 LAMAR STREET
MISSION, KS 66202**

**NPDES Storm Water Pollution Prevention Plan for
Storm Water Discharges Associated with
Construction Activity**

Confluence

Project No. 23093

November 2023 to August 2024

Insert Contractors Certification and NOT Here

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2.0 Site Evaluation

The following sections describe existing conditions at the site.

2.1 Topography and Drainage

The existing topography of the project area includes a gentle slope across the site with elevations ranging from 1048' to 1032'. The project includes one benchmark as presented in the Land Disturbance Plans.

2.2 Soils

The soils on the project site were identified according to the soil survey maps in the *Soil Survey of Johnson County, Kansas*. The following soils are found on the Project Site:

7545—Sharpsburg-Urban land complex, 4 to 8 percent slopes

Drainage class: Moderately well drained
Runoff class: Medium
Parent material: Silty and clayey loess
Hydrologic Soil Group: C

2.3 Runoff Water Quality

No surface water quality data is available for the project sites. However, due to the nature of the site, runoff could be expected to contain some suspended solids.

2.4 Receiving Waters

Runoff from the project site flows by overland flow to on site storm sewer. Mohawk Park is within the Brush Creek watershed, which is approximately 13,500 total acres.

3.0 Site Construction Plan

The following sections describe the proposed development and site construction plan.

3.1 Construction Activities

The project includes the construction of new public park facilities in Mohawk Park in Mission, Kansas. Soil disturbing activities will include clearing, grubbing, demolition of existing pavements, mass grading, and final grading. Site activities will also include: grading permanent swales and berms; construction of proposed parking lot; construction of proposed buildings and parking facilities; installation of site utilities – sanitary, water, and storm sewer; installation of erosion control structures throughout the site; and permanent site landscaping. The project will have construction access off of Lamar Street, at the existing parking lot. This construction entrance will eventually be removed and re-established as landscaped turf area. The construction entrance will be stabilized with aggregate to reduce tracking of soil onto the surrounding roadways.

A record of the project site construction activities must be maintained as part of this Plan. Appendix A includes a form and instructions to record such information on an ongoing basis.

3.2 Construction Sequence

The project will be constructed generally following the sequence indicated below.

DESCRIPTION OF WORK - PHASE 2:

- INSTALL PERIMETER EROSION CONTROL MEASURES AND TREE PROTECTION FENCING.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCE AROUND SITE.
- INSTALL TEMPORARY SWALES AND DIVERSION BERMS, WITH ROCK CHECK DAMS AND SILT FENCING WHERE NECESSARY.
- REMOVE TREES AND CLEAR AND GRUB INITIAL WORK AREAS.
- REMOVE EXISTING PARKING DRIVE OFF OF HORTON ST.
- REMOVE ADDITIONAL EXISTING PAVEMENT IN ACCORDANCE WITH PLANS.
- REMOVE EXISTING PLAY AREA
- INSTALL EROSION CONTROL MEASURES AROUND STORM SEWERS.
- INSTALL INTERMEDIATE SILT FENCES ON SLOPES AS EMBANKMENT OCCURS ACROSS SITE TEMPORARILY SEED AREAS DOWNSTREAM.
- MASS GRADE PERMANENT BERMS, PLAY FIELDS, AND LOOP TRAIL
- INSTALL LOOP TRAIL AND SPORT COURT

- INSTALL PERIMETER CURB AND GUTTER AND BASE COURSE OF ASPHALT IN PERIMETER DRIVE AREA.
- INSTALL ADDITIONAL EROSION CONTROL MEASURES AT TOES OF SLOPE ADJACENT TO CURB LINE AS APPLICABLE.
- COMPLETE FINAL GRADING, SEED/SOD, AND LANDSCAPE PERIMETER AREAS.
- INSTALL SURFACE COURSE ON PARKING DRIVE, WALKS AND FLATWORK.
- INSTALL PLAYGROUND/SURFACING PER MANUFACTURER INSTRUCTIONS
- COMPLETE FINAL GRADING AND SOD/LANDSCAPE AROUND SITE AND SIDEWALK AREAS.
- FINAL SITE CLEANUP.
- MAINTAIN EROSION CONTROL MEASURES UNTIL SITE IS STABILIZED.
- INSPECT AND RESEED REMAINING DISTURBED AREAS, WASHOUTS, ETC.
- REMOVE SEDIMENT BUILDUP, RESEED AND STABILIZE AS EROSION CONTROL MEASURES ARE REMOVED.

4.0 Storm Water Management Plan

This storm water management plan was designed following EPA guidelines. Structural sediment control devices will be the main means of storm water management. Storm water sediment controls will be installed before any construction begins.

4.1 General Description of Storm Water Management System

The potential for storm water runoff pollution will be present during construction of the subdivision. This risk will be minimized through the use of several control measures implemented before and during the construction sequence.

The storm water management system was designed in accordance with the EPA's guidance document entitled *Storm Water Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-005, September 1992). Structural measures are the main means of storm water management. Storm water control measures are described and shown on the Land Disturbance Plan Drawings.

It will be the responsibility of the Contractor to revise the Land Disturbance Plan Drawings if the location or types of control measures are changed in the field.

4.2 Project Site

The surface water management during construction will be through the use of silt fencing. The silt fencing will remove suspended solids before runoff outfalls from the site.

4.2.1 Stabilization Practices

Temporary and permanent stabilization methods will be used on the project site. Two major stabilization methods that will be used on the site are preserving existing vegetation where possible and disturbing only the area needed for project construction. Disturbed portions of the site will be stabilized within 14 days after construction activity has permanently ceased, with two exceptions – when snow cover precludes construction or construction will resume within 21 days. Stabilization practices may include permanent seeding and mulching.

4.2.2 Structural Practices

Temporary and permanent structural devices to divert, store, or limit runoff from disturbed areas will be used on the project site. Such devices may include: silt fences, swales, berms, inlet protection, and a temporary construction entrance. Details of the structural control measures are shown on the Land Disturbance Plans.

5.0 Potential Storm Water Pollutant Sources and Control Measures

Pollutants from various sources have the potential to enter the storm water system during project construction. A description of these potential pollutants and control measures to reduce the risk of storm water contamination is provided below.

5.1 Construction Silt and Dust

The post-development site runoff flows by overland flow to a downstream pond. Construction of the project will generate silt and fugitive dust.

Silt barriers (fences) will be installed perpendicular to the storm runoff on all disturbed slopes as shown on the Erosion Control Plan to control offsite discharges of silt. The silt barrier will be installed after the clearing and grubbing necessary for placement of the silt barrier is complete, but before the clearing and grubbing of the remaining work area is started. The silt barrier will remain in place until the up-slope surface is permanently stabilized. If construction in a particular area will cease temporarily, temporary soil stabilization will be implemented no more than 14 days after the construction has ceased unless activity will resume in that area within 21 days. Permanent stabilization will take place no later than 14 days after construction activities have permanently ceased in an area.

Fugitive dust may be generated during dry weather conditions. Dust control will be directed by the Construction Manager. Water sprays will be used for dust control.

5.2 Offsite Sediment Tracking

The surrounding streets will be kept relatively free of excess mud, dirt, and rock tracked from the project site. The site access drive will be constructed with a stabilized construction entrance to reduce tracking of sediment offsite.

5.3 Petroleum Products

Construction equipment will require diesel fuel and oil on a regular basis so the potential exists for spills or leaks. All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to ensure proper operation and reduce the chance of leaks. No “topping off” of fuel tanks will be allowed to reduce the possibility of spills.

Petroleum products will be stored in clearly labeled and tightly sealed containers or tanks. Any asphalt used onsite will be applied according to the manufacturer’s recommendations. Any soil contaminated by fuel or oil spills will be removed and disposed of at an approved disposal site by the Contractor.

5.4 Sanitary Wastes

A licensed sanitary waste management contractor will collect all construction or temporary sanitary wastes from portable units. The units will be maintained on a regular basis.

5.5 Hazardous Wastes

All hazardous waste materials will be disposed of according to local or state regulation or the manufacturer's recommendations. The Construction Manager who will also be responsible for their implementation will instruct site personnel of these regulations and recommendations.

5.6 Fertilizers

Fertilizers will be applied as recommended by the manufacturer. After application the fertilizer will be worked into the soil to limit exposure to storm waters. Fertilizers will be stored in a covered area or in watertight containers. Any partially used bags or containers will be properly sealed and stored to avoid spills or leaks.

5.7 Waste Materials

All construction waste material will be collected, deposited, and stored in metal dumpsters from a licensed solid waste management contractor. No construction waste materials will be buried onsite. Any burning will be conducted in accordance with local or state regulations. It is the responsibility of the Construction Manager to obtain any and all permissions and permits for burning if so locally allowed. All site personnel will be instructed of the proper waste disposal procedures by the Construction Manager.

5.9 Allowable Non-Storm Water Discharges

The following sources of non-storm water discharges from project construction activities may be combined with storm water discharges.

- Waters used to wash vehicles or to control dust
- Uncontaminated dewatering discharges
- Fire fighting waters
- Vegetation watering
- Potable or spring water discharges

6.0 Best Management Practices

Chemicals, petroleum products, and other materials will be used and stored on the project site. Best Management Practices, such as good housekeeping measures, inspections, containment, and spill prevention practices will be used to limit contact between storm water and potential pollutants.

6.1 Good Housekeeping

The good housekeeping practices listed below will be followed to reduce the risk of potential pollutants entering storm water discharges. All construction personnel will be responsible for monitoring and maintaining housekeeping tasks or notifying the appropriate person of a problem.

- Store only enough product to do the job.
- Store all materials in a neat and orderly manner, in the appropriate containers and, if possible, under a roof or within an enclosure.
- Keep products in the original container with the original manufacturer's label.
- Do not mix products unless recommended by the manufacturer.
- Use all of a product before disposing of the container.
- Use and dispose of products according to the manufacturer's recommendations or the Construction Manager's direction.
- Perform regular inspections of the storm water system and the material storage areas.
- When and where appropriate, use posters, bulletin boards, or meetings to remind and inform construction personnel of required procedures.

6.2 Hazardous Materials

Storage areas for hazardous materials such as oils, greases, paints, fuels, and chemicals, must be provided with secondary containment to ensure that spills in these areas do not reach waters of the State. Contingencies for the proper disposal of contaminated soils shall be established (use of licensed hauler and approved landfill, for example) early in the construction period.

6.3 Spill Prevention and Response

In addition to the good housekeeping and hazardous materials storage procedures described above, spill prevention and cleanup practices will be as follows.

- Construction personnel will be informed of the manufacturer's recommended spill cleanup methods and the location of that information and cleanup supplies.
- Materials and equipment for the cleanup of a relatively small spill will be kept in the materials storage area. These facilities may include brooms, rags, gloves, shovels, goggles, sand, sawdust, plastic or metal trash containers, and protective clothing.
- All containers will be labeled, tightly sealed, and stacked or stored neatly and securely.

The spill response procedure will be as follows:

- Step 1. Upon discovery of a spill, stop the source of the spill.
- Step 2. Cease all spill material transfer until the release is stopped and waste removed from the spill site.
- Step 3. Initiate containment to prevent spill from reaching State waters.
- Step 4. Notify a Supervisor or the Construction Manager of the spill.
- Step 5. The Construction Manager will coordinate further cleanup activities.
- Step 6. Any significant spill of hazardous material will be reported to the appropriate state and or local agencies at the following numbers:

National Response Center	1-800-424-8802
State Contacts:	
KDHE	785-296-1679 (24 Hours)
KEM	785-296-8013 (24 Hours)
Local Contacts:	
Police	911

- Step 7. Review the construction storm water pollution prevention plan and amend if needed. Record a description of the spill, cause, and cleanup measures taken.

7.0 Inspection, Maintenance, and Reporting Procedures

Site inspection and facility maintenance are important features of an effective storm water management system. Qualified personnel will inspect disturbed areas of the site not finally stabilized, storage areas exposed to precipitation, all control measures, and site access areas to determine if the control measures and storm water management system are effective in preventing significant impacts to receiving waters.

7.1 Erosion and Sediment Controls

The following procedures will be used to maintain erosion and sedimentation controls.

- All control measures will be inspected at least once a week and after each rainfall event producing runoff and daily during prolonged rainfall periods.
- All measures will be maintained in good working order. If a repair is necessary, it will be made within 24 hours of the inspection.
- Sediment will be removed from the silt barriers when it has reached one-third of the height of the barrier.
- Silt barriers will be inspected for depth of accumulated sediment, tears, attachment to posts, and stability on a weekly basis.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
- The Construction Manager will select individuals to be responsible for inspections, maintenance, repairs, and reporting. The designated individuals will receive the necessary training from the Construction Manager to properly inspect and maintain the controls in good working order.
- Inspection Form 1 will be completed after each inspection.
- The completed Inspection Forms will be kept with this Plan in Appendix B.

7.2 Non-Storm Water Controls

The following procedures will be used to maintain the non-storm water controls.

- All control measures will be inspected at least once a week and after each runoff producing rainfall event and daily during prolonged rainfall periods.
- All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of the inspection.
- The Construction Manager will select individuals to be responsible for inspections, maintenance, repairs, and reporting. The designated individuals will receive the necessary training from the Construction Manager to properly inspect and maintain the controls in good working order.
- Inspection form will be completed after each inspection.
- The completed Inspection Forms will be kept with this Plan in Appendix B.

7.3 Reporting

Inspection forms are provided in section 13 for recording inspections and maintenance of the control measures: After each inspection, the inspector completes an inspection report and inserts that report in Appendix B of this Plan.

A fully signed copy of this Plan and any supporting materials must be maintained at the project site from the date of project initiation to the date of final stabilization. All records and supporting documents will be compiled in an orderly manner and maintained for a period of three years following final stabilization.

The generation of reports, as part of the construction process and inspection or amendment procedures, provides accurate records that can be used to evaluate the effectiveness of this Plan and document the plans compliance. Changes in design or construction of the storm water management system are documented and included with the Plan to facilitate Plan review or evaluation. Section 8 contains the form for the log of modifications and amendments.

Plan amendments will be documented on the form in the front of this Plan and on the drawings. A record of construction activities will be maintained in Appendix A of this Plan. Completed inspection and maintenance forms will be kept in Appendix B of this Plan.

8.0 Certification of Compliance

This Construction Storm Water Pollution Prevention Plan reflects best management practices and erosion and sedimentation control measures for storm water management as recommended by the Environmental Protection Agency.

8.1 Contractor Certifications

The Contractor Certification forms provided in this section and in the beginning of this report indicate that each contractor or subcontractor working on the project site understands the terms, conditions, and intent of the NPDES General Permit for Construction Storm Water Discharges Associated with Construction Activity and will implement the measures described in this Plan appropriate to his area of work.

All contractors and subcontractors must complete the two separate forms. If additional sheets are needed due to more subcontractors on site than sheets provided herein, additional sheets may be copied and inserted into booklet at the job site.

9.0 Project Completion

Construction is considered complete when the project site is 90 percent (density) stabilized. The Construction Manager may terminate construction erosion and sediment control measures at this time. A Notice of Termination should be submitted to the Kansas Department of Health – Bureau of Water requesting termination of the Construction Storm Water Pollution Prevention Plan Permit.

Permanent storm water control measures incorporated into the project site design include vegetated swales, aggregate surfacing of facility areas, culvert inlet/outlet protection.

Appendix A
Construction Activity Record

Appendix B
Completed Inspection Forms

Cut/Fill Report

Generated: 2024-02-13 12:43:46

By user: anichols

Drawing: S:\1-PROJECTS\2023\23093_Mohawk Park Phase II\23093_WORKING\AUTOCAD\S\1-PROJECTS\2023\23093_Mohawk Park Phase II\23093_WORKING\AUTOCAD\X-23093 GRADING.dwg

Volume Summary							
Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Confluence Cut Fill	full	1.000	1.000	138161.94	1422.19	1169.97	252.23<Cut>

Totals							
				2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total				138161.94	1422.19	1169.97	252.23<Cut>

* Value adjusted by cut or fill factor other than 1.0

THE LINE SHOWN ABOVE IS
 EITHER THE ORIGINAL GRADE OR
 THE PROPOSED GRADE.

D

THE SQUARES ABOVE ARE COLOR
 KEY TO THE GRADING PLAN.
 IF PROVIDED CORRECTLY.

C

B

A

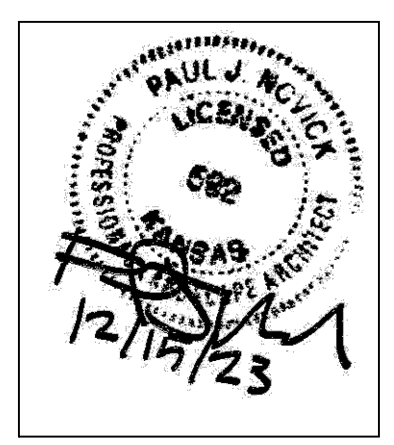
CUT / FILL Table			
Number	Minimum	Maximum	Color
1	-5.00%	-1.00%	Red
2	-1.00%	-.002%	Light Red
3	-.002%	.002%	Light Green
4	.002%	1.00%	Light Blue
5	1.00%	5.00%	Dark Blue

GRADING NOTES

- A. ALL SPOT ELEVATIONS ARE AT THE TOP OF FINISHED SURFACES UNLESS NOTED OTHERWISE. SPOT ELEVATIONS SHOWN IN PARKING ARE AT THE BOTTOM OF CURB. ADD 6" TO COMPUTE TOP OF CURB ELEVATION.
- B. CONTRACTOR TO VERIFY ALL SPOT ELEVATIONS FOR POSITIVE DRAINAGE BEFORE INSTALLATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE SURFACE DRAINAGE IN ALL AREAS, UNLESS OTHERWISE NOTED. ALL NEWLY GRADED GROUND SURFACES SHALL BE FINISHED TO UNIFORM GRADES AND SLOPED IN SUCH A MANNER TO BE FREE OF DEPRESSIONS THAT CAUSE AREAS OF STANDING WATER. THE CONTRACTOR SHALL REPORT ANY CONFLICTS WITH THIS REQUIREMENT TO THE LANDSCAPE ARCHITECT FOR RESOLUTION PRIOR TO FINAL GRADING OPERATIONS.
- C. WALK CROSS SLOPE MAY NOT EXCEED 2.0%. RUNNING SLOPE MAY NOT EXCEED 5.0%. RUNNING SLOPE FOR RAMPS MAY NOT EXCEED 1:12 WITH LANDINGS THAT DO NOT EXCEED 2.0% IN ANY DIRECTION.
- D. WHERE PROPOSED GRADES MEET EXISTING, BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN THE NEW WORK AND EXISTING WORK. PONDING AT JOINTS WILL NOT BE ACCEPTED.
- E. CONTACT LANDSCAPE ARCHITECT PRIOR TO BACKFILLING AGAINST EXISTING BUILDINGS. PROVIDE WATERPROOFING WHEN BACKFILLING AGAINST EXISTING BUILDINGS.
- F. FINAL BERM SHAPE TO BE APPROVED BY LANDSCAPE ARCHITECT.
- G. SEE SPECIFICATIONS FOR MINIMUM DEPTH OF TOPSOIL FOR ALL LAWN AREAS AND PLANTING BEDS.
- H. DEBRIS SHALL BE REMOVED AND PAVEMENT WITHIN THE RIGHT-OF-WAY SWEEPED AT THE END OF EACH WORKING DAY.
- I. CONTRACTOR TO FIELD ADJUST ALL EXISTING SITE UTILITIES TO NEW FINISHED GRADES. EXISTING UTILITIES INCLUDE, BUT ARE NOT LIMITED TO, FIRE HYDRANTS, MANHOLE RIMS, INLETS, WATER VALVES, AND LIGHT BASES.
- J. SILT FENCE AND INLET PROTECTION SHALL BE MAINTAINED UNTIL ESTABLISHMENT OF PERMANENT GROUND COVER.

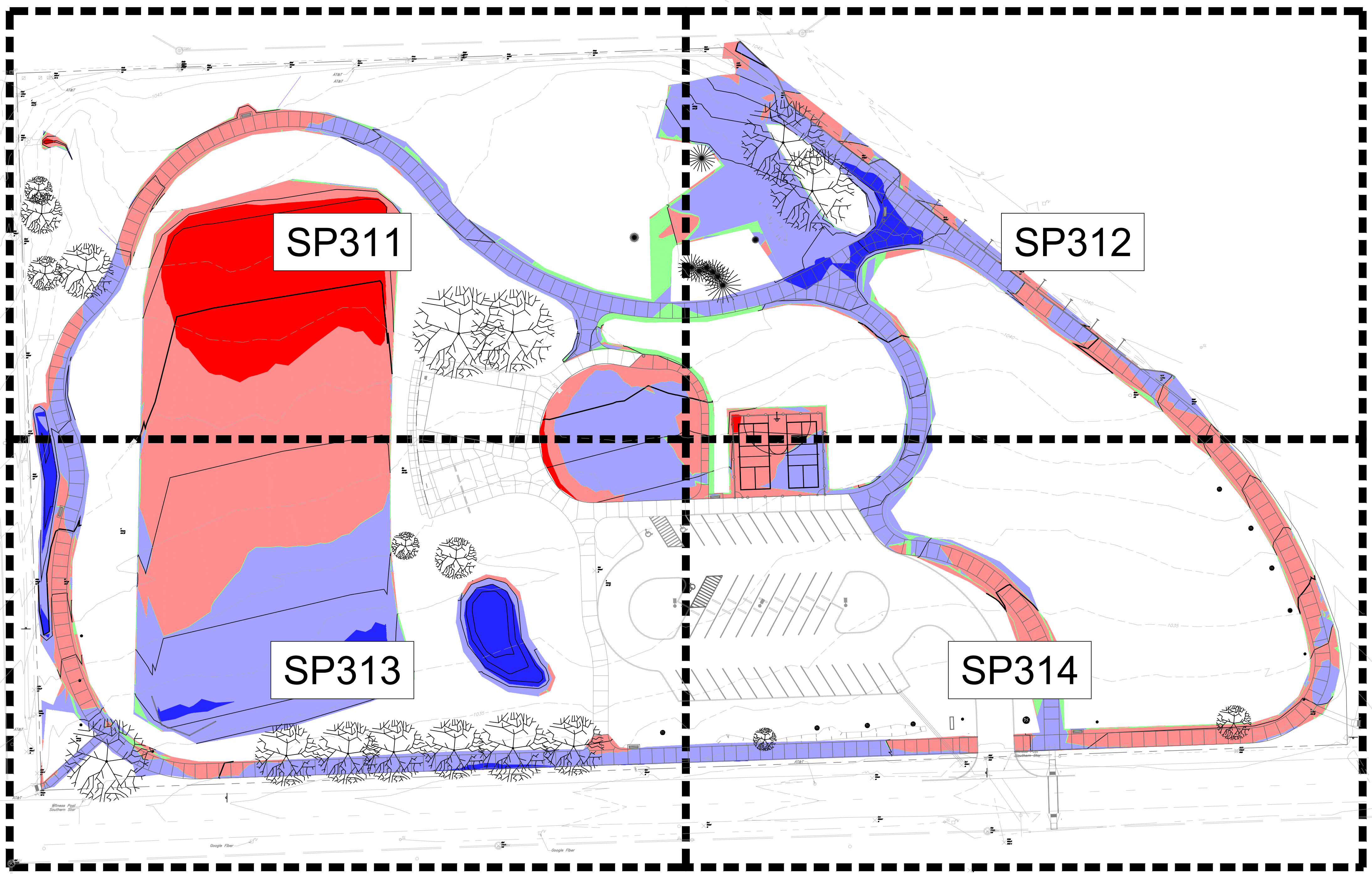


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Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL



MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

CUT / FILL

SP310

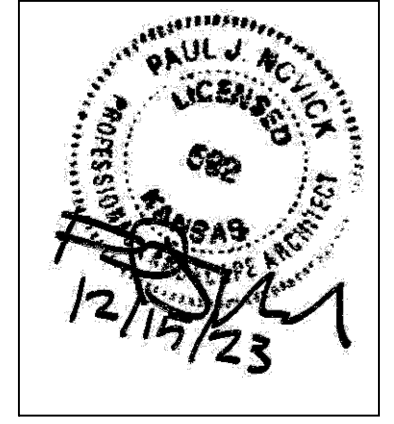
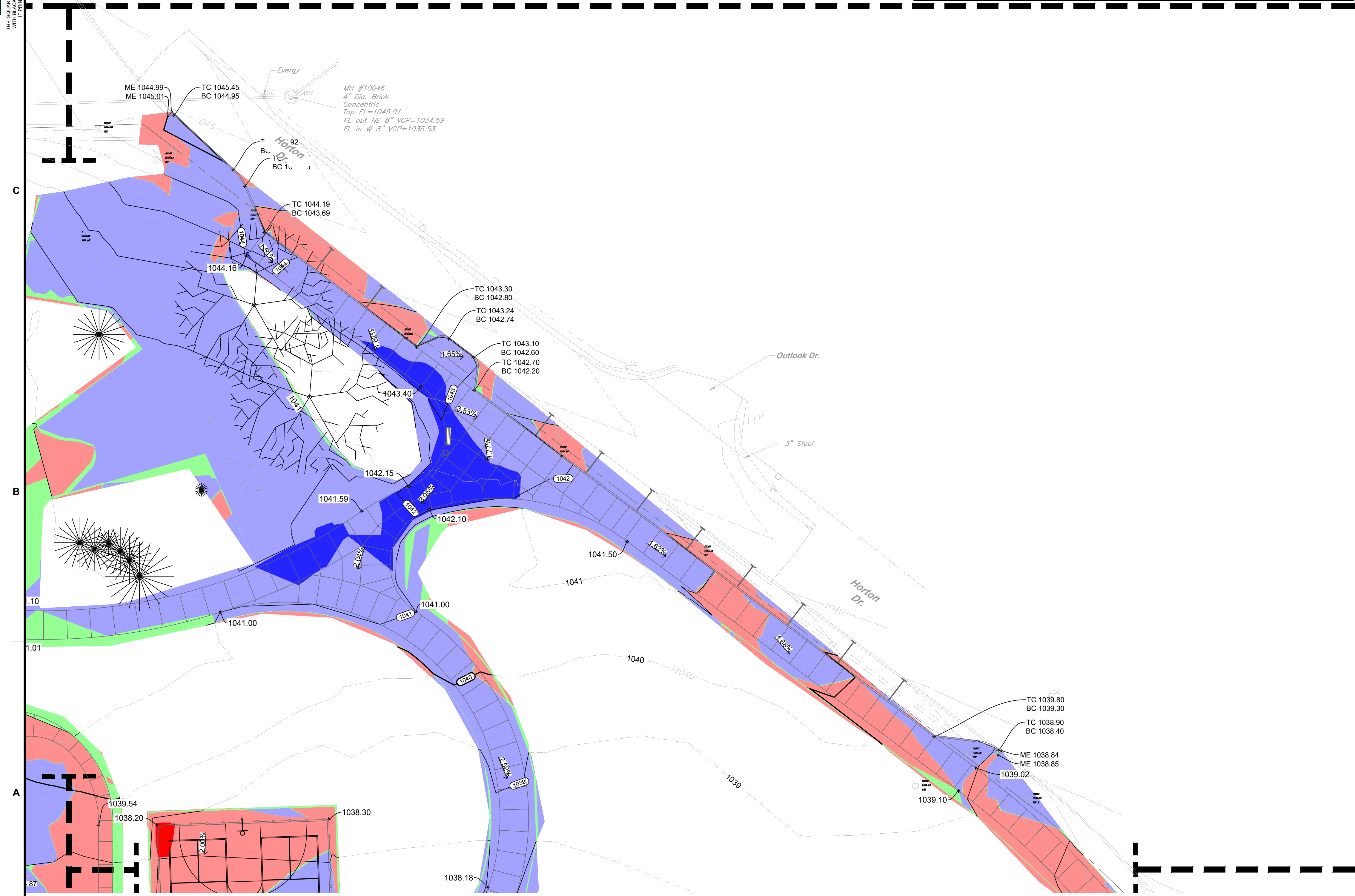
01 SP300 GRADING PLAN



CUT / FILL Table			
Number	Minimum	Maximum	Color
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3	-.002%	.002%	Light Green
4	.002%	1.00%	Light Blue
5	1.00%	5.00%	Dark Blue

THE LINE SHOWN ABOVE IS
 EITHER A PROPERTY LINE
 OR THE ORIGINAL GRADE SURFACE

THE SQUARES ABOVE ARE COLOR
 WITH A NUMBER TO IDENTIFY THEM.
 IF PRINTED CORRECTLY,
 THEY WILL CORRELATE WITH THE
 CUT / FILL TABLE.



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No.	Date	Description
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Project Number	23093
Issue	00000
Date	YYYY-MM-DD

CUT / FILL
 ENLARGEMENT

SP312

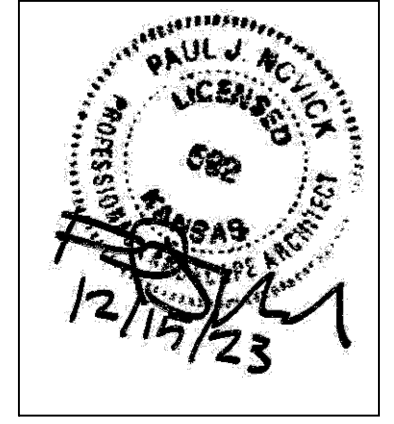
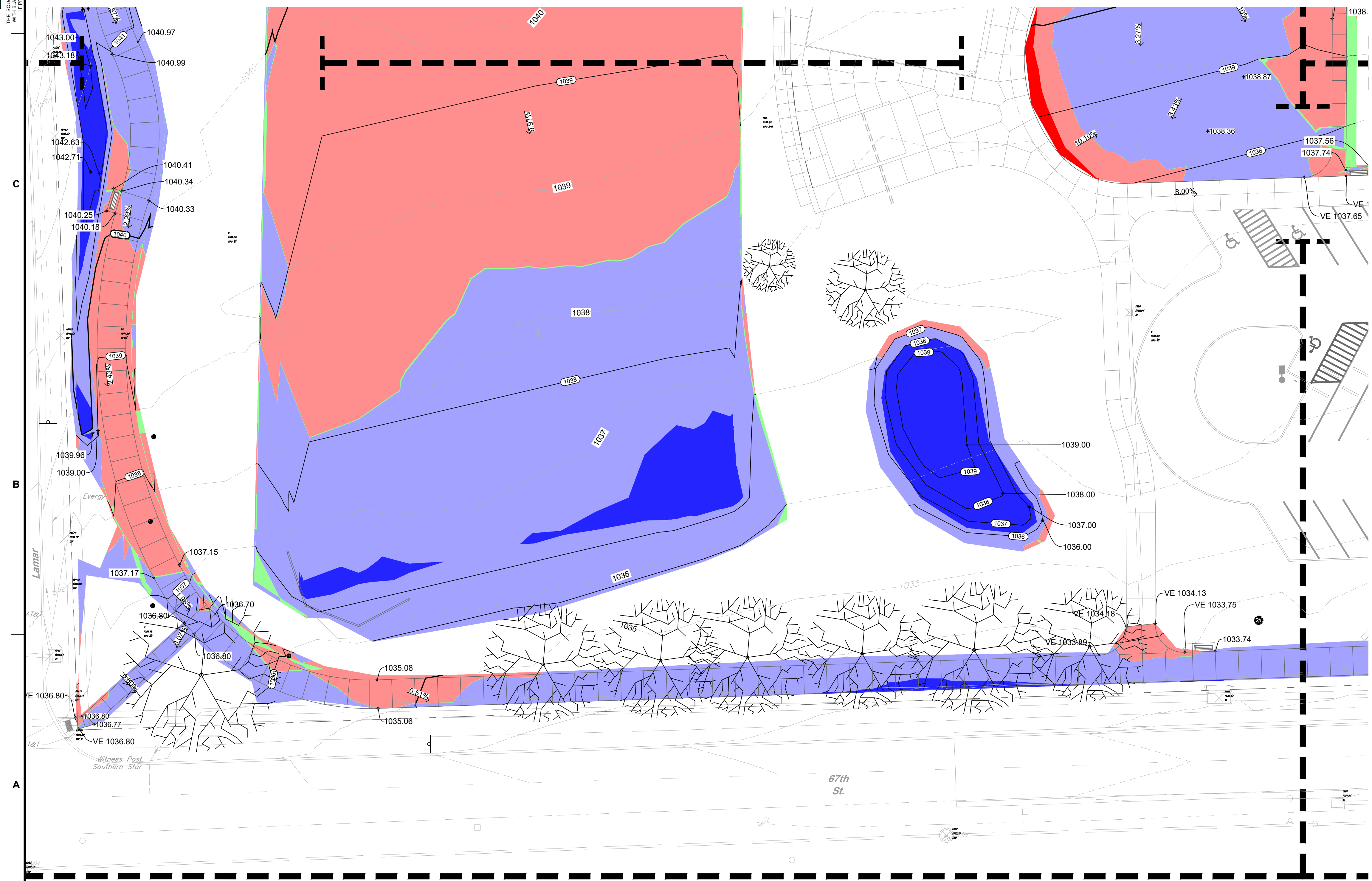
03 SP302 GRADING PLAN ENLARGEMENT



CUT / FILL Table			
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2	-1.00%	-.002%	Light Red
3	-.002%	.002%	Light Green
4	.002%	1.00%	Light Blue
5	1.00%	5.00%	Dark Blue

THE LINE SHOWN ABOVE IS
 EITHER A CENTERLINE OR
 EITHER A PROPERTY LINE
 AS SHOWN ON THE ORIGINAL PLANS
 IF PRINTED CORRECTLY.

THE SQUARES ABOVE ARE COLOR
 KEY FOR THE GRADING PLAN.
 IF PRINTED CORRECTLY.



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MOHAWK PARK PHASE 2
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Project Number	23093
Issue	00000
Date	YYYY-MM-DD

CUT / FILL
 ENLARGEMENT

SP313

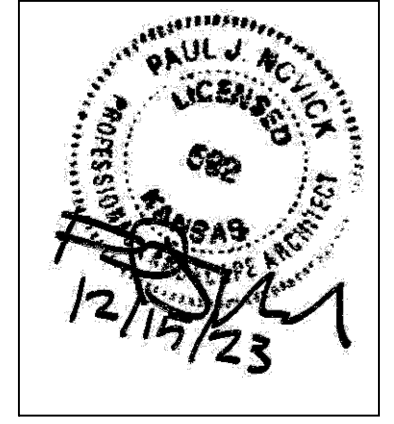
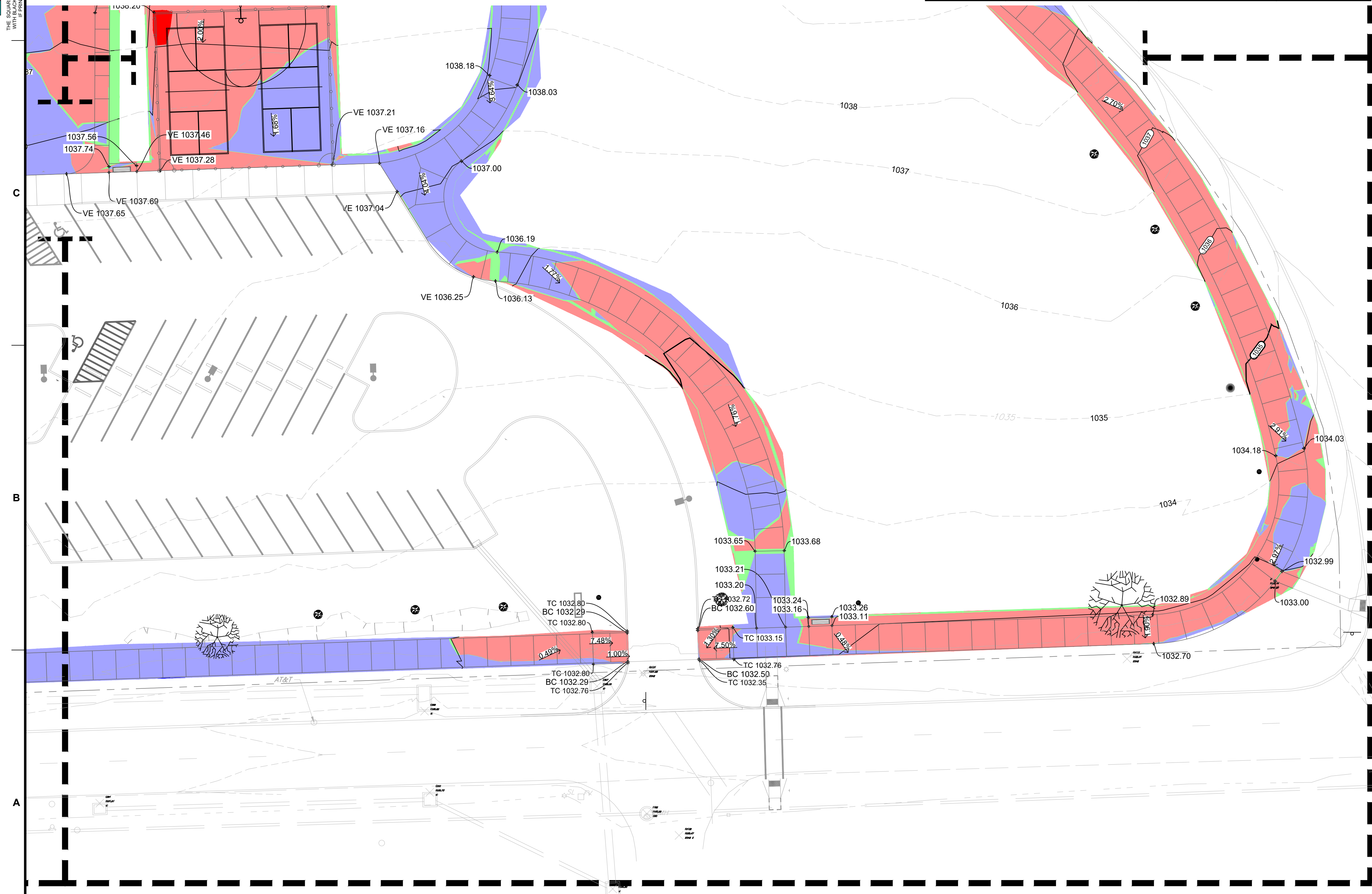
04 SP303 GRADING PLAN ENLARGEMENT



CUT / FILL Table			
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4	.002%	1.00%	Light Blue
5	1.00%	5.00%	Dark Blue

THE LINE SHOWN ABOVE IS
 EITHER AN ENLARGEMENT OF
 EITHER THE ORIGINAL LARGE SIZE
 SHEET'S ORIGINAL LARGE SIZE

THE SQUARES ABOVE ARE COLOR
 WITH THE SQUARES ABOVE
 IF PRINTED CORRECTLY



Revision Schedule

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MOHAWK PARK PHASE 2
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 6090 WOODSON ST. MISSION, KS 66202

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Issue	00000
Date	YYYY-MM-DD

CUT / FILL
 ENLARGEMENT





SP314

05 SP304 GRADING PLAN ENLARGEMENT



THE LINE SHOWN ABOVE IS
 EITHER A 1/4" OR 1/2" SCALE
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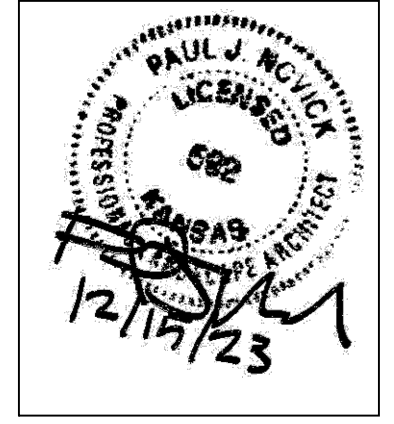
THE SQUARES ABOVE ARE COLOR
 WITH THE GRADING PLAN. THEY
 IF PRINTED CORRECTLY.

Slopes Table			
Number	Minimum Slope	Maximum Slope	Color
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2	5.00%	10.00%	
3	10.00%	17.00%	
4	17.00%	100.00%	

- GRADING NOTES**
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 - C. WALK CROSS SLOPE MAY NOT EXCEED 2.0%. RUNNING SLOPE MAY NOT EXCEED 5.0%. RUNNING SLOPE FOR RAMPS MAY NOT EXCEED 1:12 WITH LANDINGS THAT DO NOT EXCEED 2.0% IN ANY DIRECTION.
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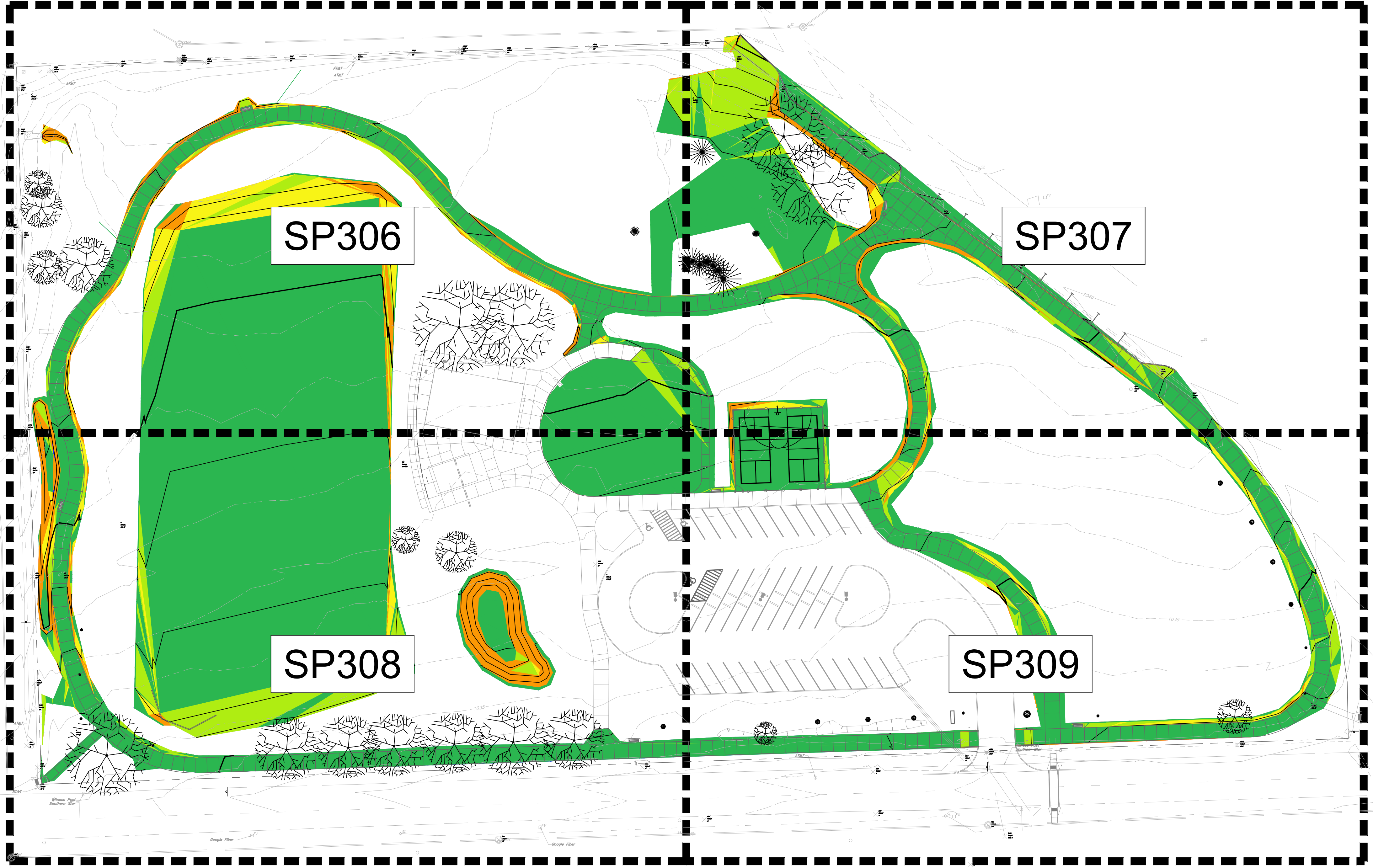
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Revision Schedule

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MOHAWK PARK PHASE 2





MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

SLOPE ANALYSIS

SP305



Slopes Table			
Number	Minimum Slope	Maximum Slope	Color
1	0.00%	5.00%	
2	5.00%	10.00%	
3	10.00%	17.00%	
4	17.00%	100.00%	

THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL OR
 A COPY OF THE ORIGINAL

D

THE SQUARES ABOVE ARE COLOR
 WITH AN ORIGINAL OR COPY
 IF PROVIDED CORRECTLY

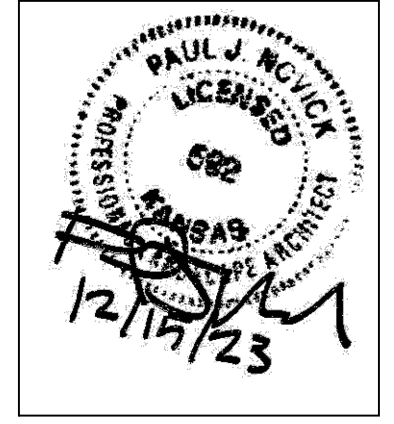
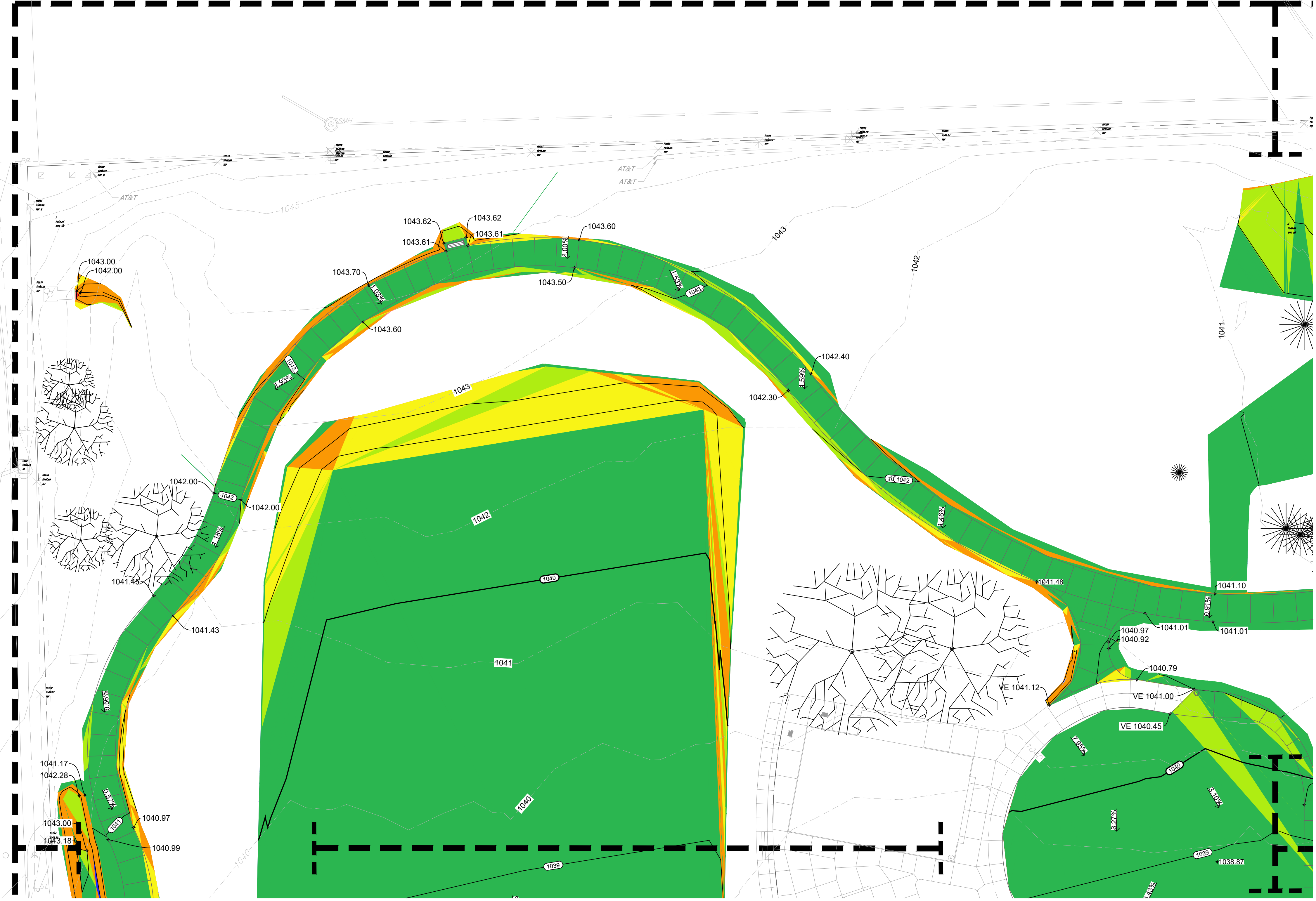
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02
 SP301

GRADING PLAN ENLARGEMENT



Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL





MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
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Project Number	23093
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SLOPE ANALYSIS
 ENLARGEMENT

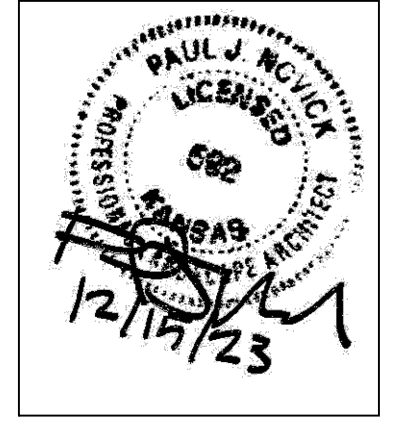
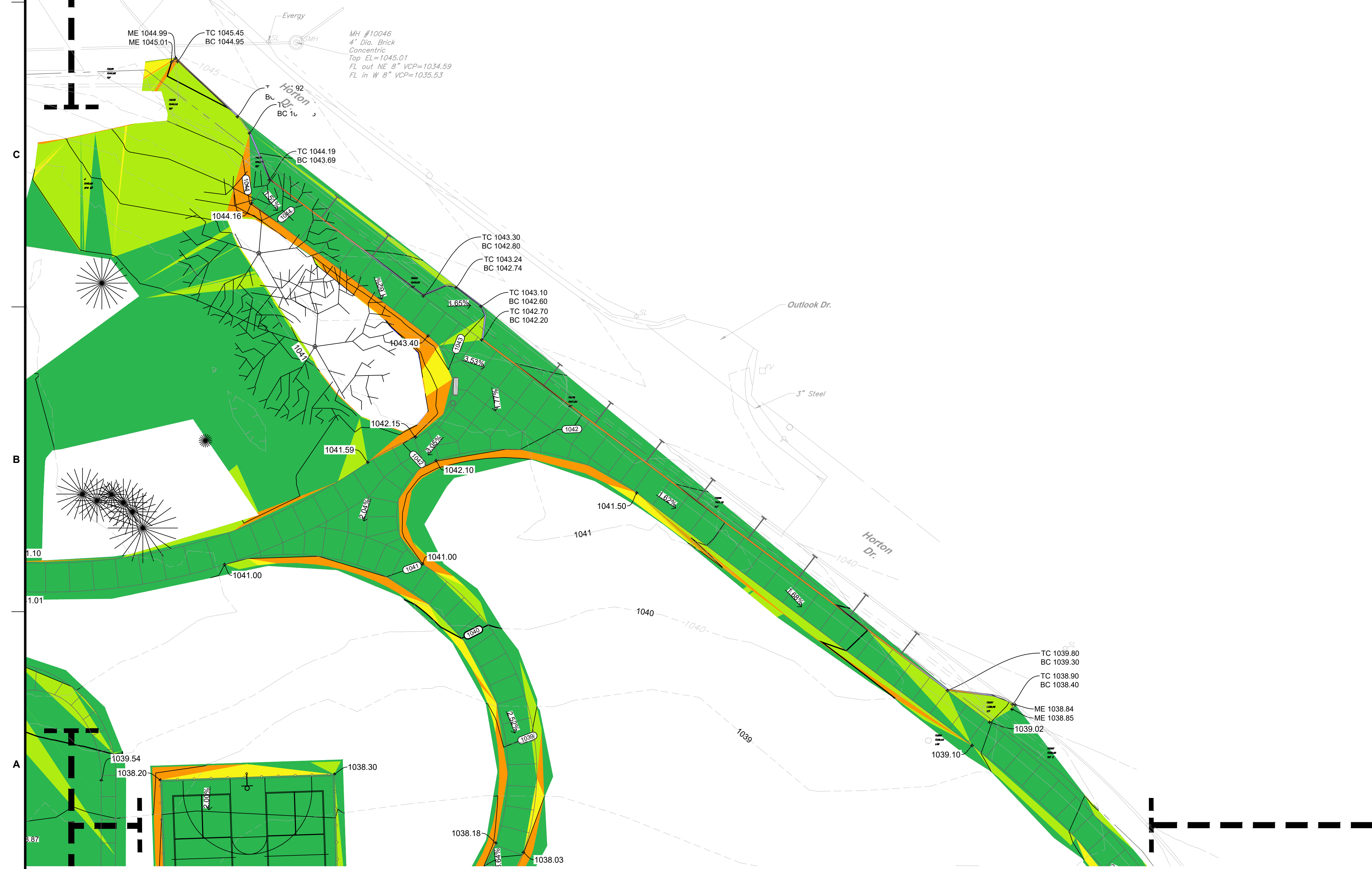
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3	10.00%	17.00%	
4	17.00%	100.00%	

THE LINE SHOWN ABOVE IS
 EITHER A CENTERLINE OR
 EITHER A PROPERTY LINE

D

C
 THE SQUARES ABOVE ARE COLOR
 KEY TO THE SLOPE ANALYSIS
 IF PROVIDED CORRECTLY



Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
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Project Number	23093
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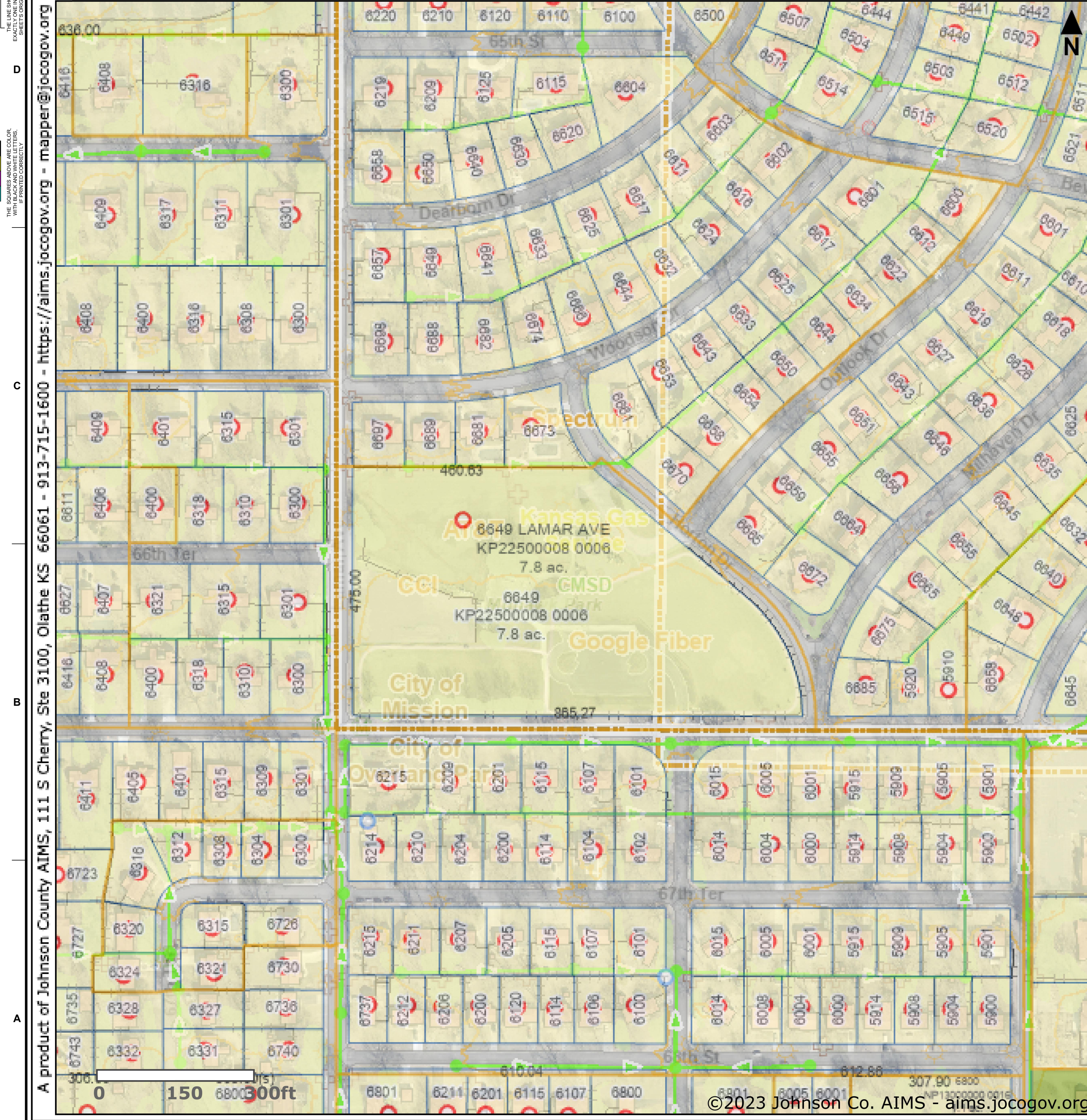
SLOPE ANALYSIS
 ENLARGEMENT

SP307

03 SP302 GRADING PLAN ENLARGEMENT



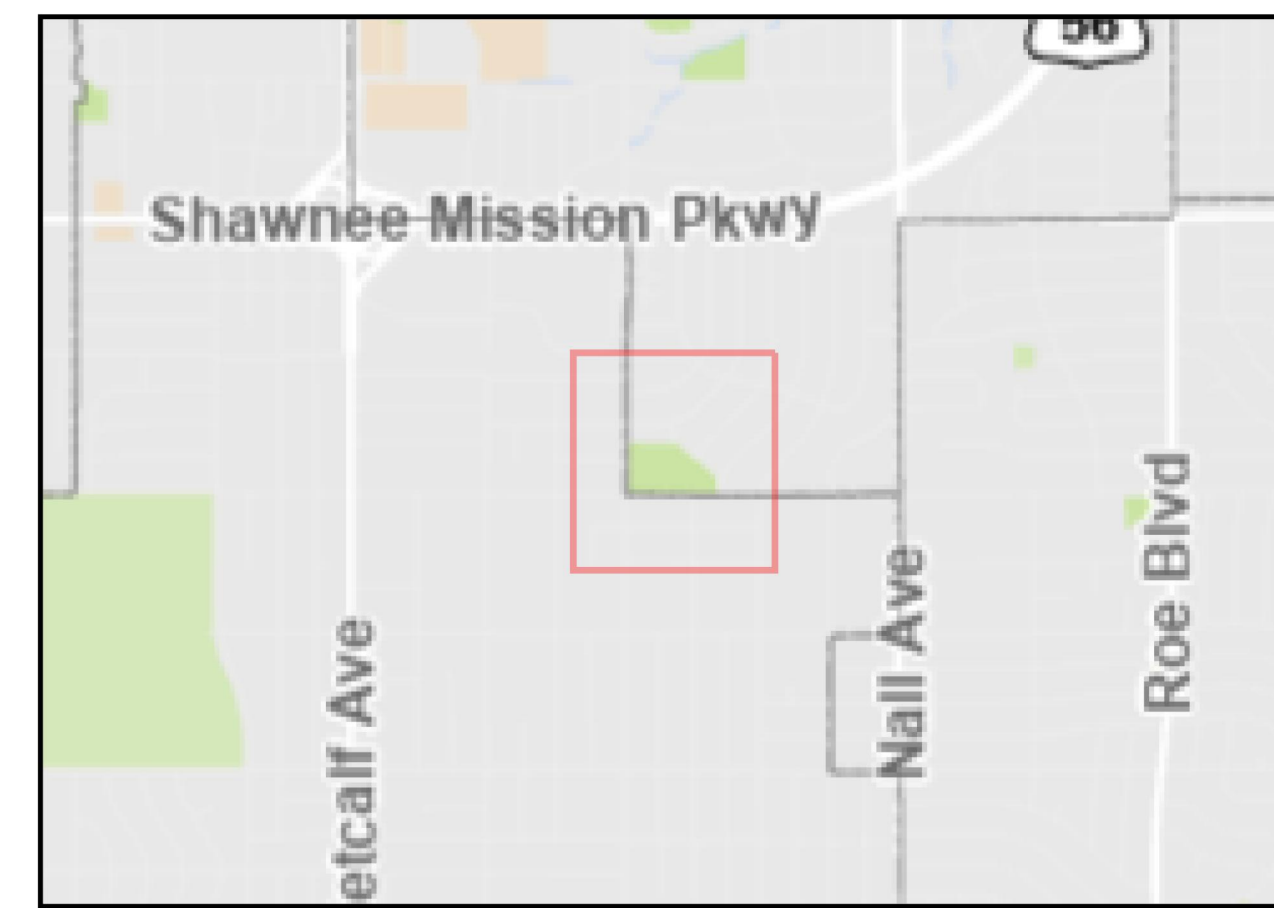
THE LINE SHOWN ABOVE IS
 EITHER A PLAT OR LOT LINE
 IF PROVIDED CORRECTLY
 C M Y K
 THE SQUARES ABOVE ARE COLOR
 PRINTED FOR REFERENCE ONLY
 IF PROVIDED CORRECTLY



Johnson Co AIMS Map

LEGEND

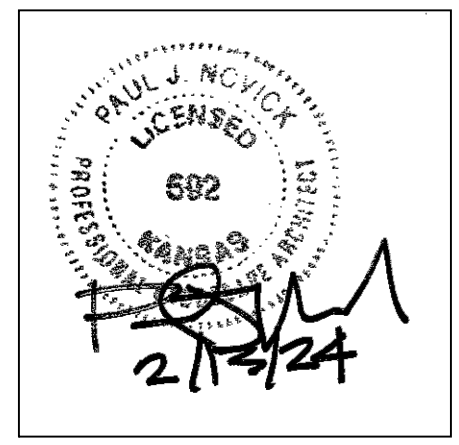
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- Address Point - Other
- Parcel Line
 - Plat
 - Lot Line
 - Original Lot
- + Address Point
- Building/Structure
- Property
 - Untaxed
 - Common Interest
 - Vertical
 - Platted
 - Unplatted
 - Right-of-way
 - Mineral Rights
 - Leased Land



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9/26/2023



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANIMETRICS

SP001



THE LINE SHOWN ABOVE IS
SHEETS ORIGINAL SCALE SIZE

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THE SQUARES ABOVE ARE COLOR
KEYS FOR THE LEGEND
IF PRINTED CORRECTLY

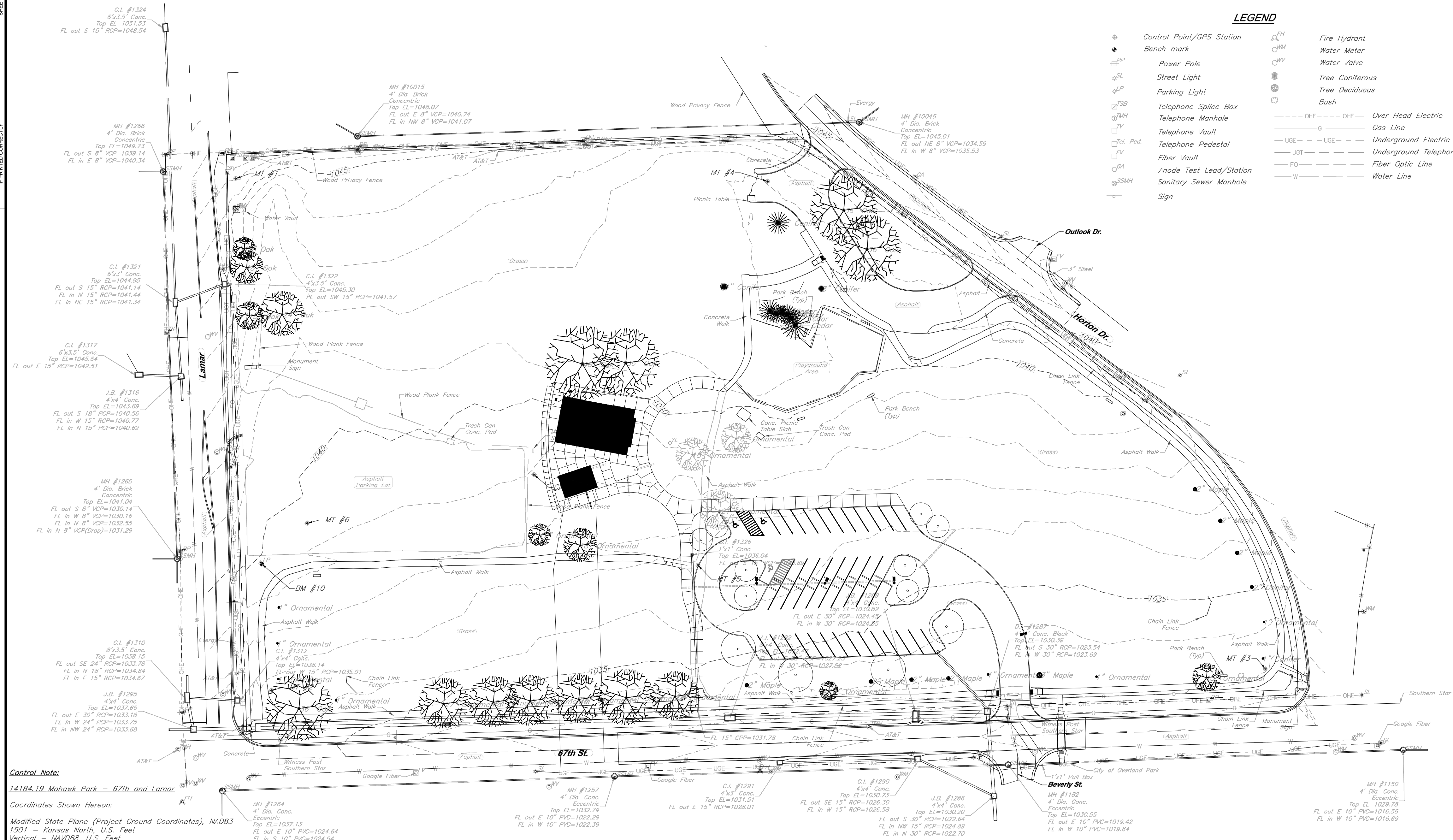
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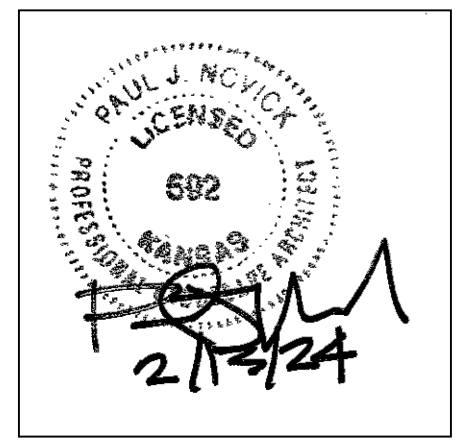
LEGEND

- Control Point/GPS Station
- Bench mark
- Power Pole
- Street Light
- Parking Light
- Telephone Splice Box
- Telephone Manhole
- Telephone Vault
- Telephone Pedestal
- Fiber Vault
- Anode Test Lead/Station
- Sanitary Sewer Manhole
- Sign
- Fire Hydrant
- Water Meter
- Water Valve
- Tree Coniferous
- Tree Deciduous
- Bush
- Over Head Electric
- Gas Line
- Underground Electric
- Underground Telephone
- Fiber Optic Line
- Water Line



Control Note:
14184.19 Mohawk Park - 67th and Lamar
Coordinates Shown Hereon:
Modified State Plane (Project Ground Coordinates), NAD83
1501 - Kansas North, U.S. Feet
Vertical - NAVD83, U.S. Feet
CAF = 0.9999211
To get to State Plane:
Coordinates x CAF = State Plane
CP #100 - Set 1/2" bar Near the Northeast Corner of Parking Lot of Mohawk Park
Ties:
1. 23.09 feet North Northwest of Duplex Nail Top of Centerline of Wood Plank Fence Corner Post
2. 5.50 feet West Southwest of Duplex Nail Top of Centerline of Wood Plank Fence Corner Post
3. 8.45 feet West of East Edge of Asphalt Parking Lot
Coordinates:
N: 263367.175
E: 2262139.538
EL: 1038.653
BM #10 - Set chiseled "x" cut Top Southeast of Corner Concrete, Base of Parking Light Pole at Southwest Corner of the West Parking Lot of Mohawk Park
Coordinates:
N: 263293.318
E: 2261915.234
EL: 1041.201
MT #1 - Found 1/2" bar set at Northwest of Corner Property of Mohawk Park
Ties:
1. 22.10 feet Northeast of Top Southeast Corner of most East Concrete Base of AT&T Splice Boxes
2. 14.29 feet North of Top Southeast Corner of most West Concrete Base of AT&T Splice Boxes
3. 5.84 feet West Northwest of Top Southeast Corner of most Southwest AT&T Telephone Vault
4. 28.30 feet South of Top Southeast Corner of Water Vault
Coordinates:
N: 263611.339
E: 2261893.430
EL: 1047.214

MT #2 - Found 1/2" bar set Near the Southwest Corner of Park Property, Northeast Corner of Intersection of 67th and Lamar
Ties:
1. 10.67 feet Northeast Near side of 1" Tree
2. 2.90 feet West of East Edge of Asphalt Walk
3. 25.57 feet South Southwest of Centerline of Gatepost at Walk
Coordinates:
N: 263189.127
E: 2261923.166
EL: 1036.748
MT #3 - Found 1/2" bar set at Southeast Corner of Park Property, Northwest Corner of Intersection of 67th and Horton Drive
Ties:
1. 9.08 feet North Northwest Near side of 1" Cedar Tree
2. 4.39 feet East of West Edge of Asphalt Walk
3. 23.27 feet East of Centerline of North most Chainlink Gate post
4. 52.00 feet East of Centerline of Horton Drive
Coordinates:
N: 263206.836
E: 2262743.403
EL: 1033.139
MT #4 - Found Mag and Shiner set at Northwest Corner of the East Parking Lot of Mohawk Park
Ties:
1. 11.15 feet Northwest of Back of Curb at End of Concrete Walk
2. 10.50 feet West of West Edge of Asphalt Parking Lot
3. 75.00 feet East of Centerline of Horton Drive
Coordinates:
N: 263608.993
E: 2262332.634
EL: 1040.876



Revision Schedule

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MOHAWK PARK PHASE 2
MISSION KS PARKS AND RECREATION
6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
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Date	YYYY-MM-DD

SURVEY

SP100

01 SURVEY



THE LINE SHOWN ABOVE IS
 EITHER A PROPERTY LINE OR
 SHEET'S ORIGINAL PLANT SIZE

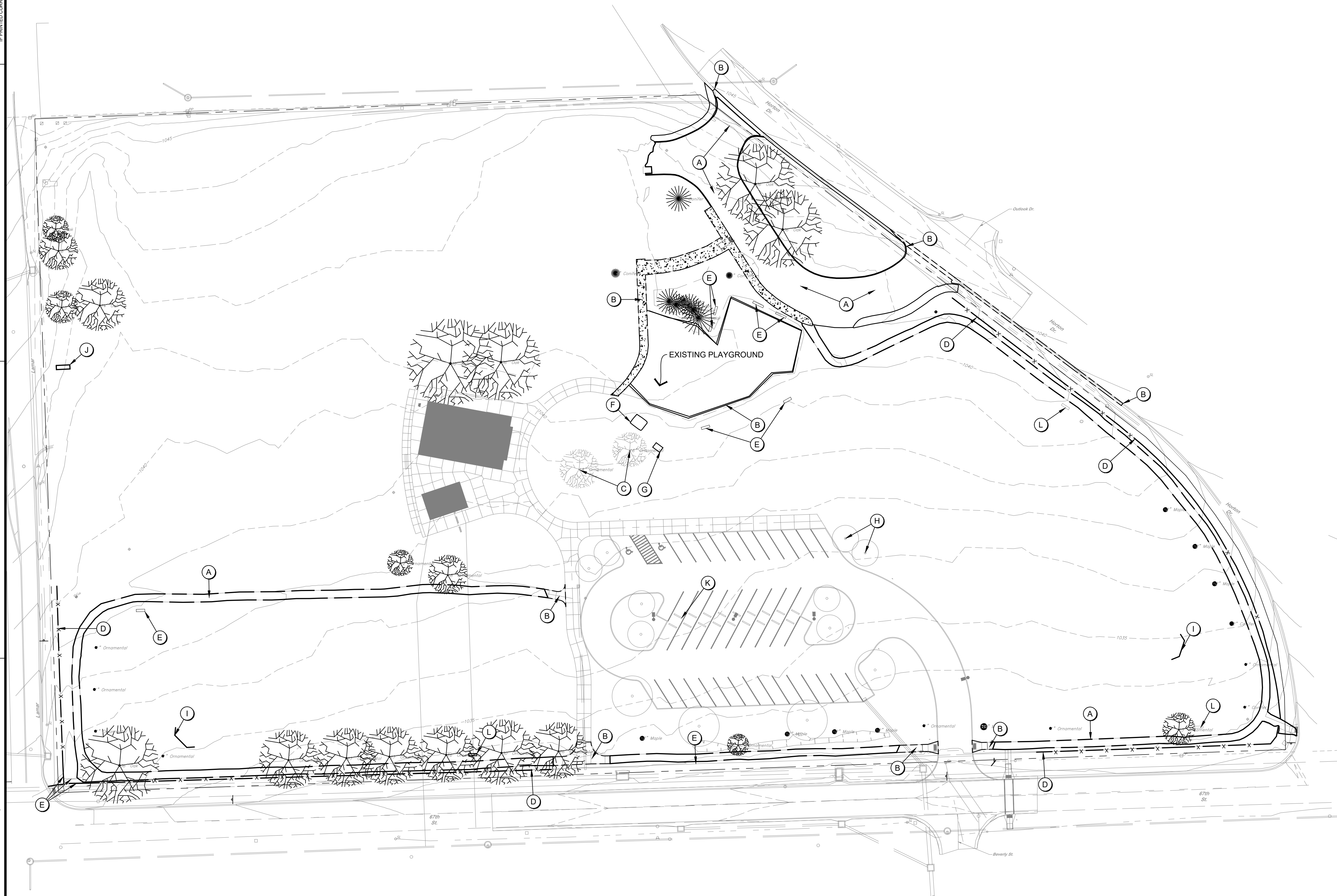
D

C
 M
 Y
 K
 THE SQUARES ABOVE ARE COLOR
 PRINTING INDICATORS. PRINT
 WITH AN INK-JET PRINTER.
 IF PRINTED CORRECTLY,
 ALL SQUARES SHOULD BE
 FULLY VISIBLE.

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DEMOLITION GENERAL NOTES

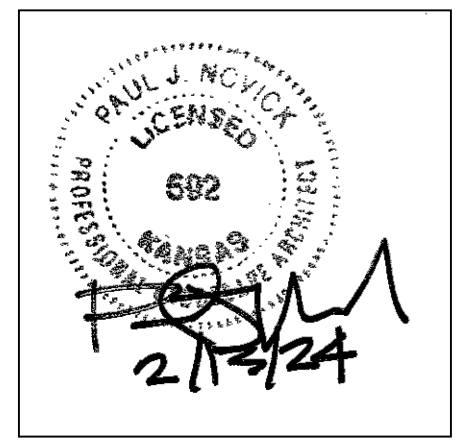
- A. PRIOR TO ANY EXCAVATION AT THE SITE, CONTRACTOR SHALL CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANIES REPRESENTATIVES TO DETERMINE POSSIBLE UTILITY LOCATIONS AND DEPTHS. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE RESULTING FROM FAILURE TO COMPLY WITH THIS REQUIREMENT. REPORT ANY DAMAGE TO EXISTING UTILITIES PRIOR TO REPAIR. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER OF THE UTILITY.
- B. FIELD VERIFY EXISTING GRADES AND LOCATIONS OF EXISTING UTILITIES, CONDUIT, LINES, POLES, TREES, PAVING, BUILDING AND OTHER SITE STRUCTURES PRIOR TO DEMOLITION OR CONSTRUCTION AND IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. THE CONTRACTOR SHALL REPORT TO THE OWNER ANY DAMAGE TO OWNER'S PROPERTY PRIOR TO REPAIR.
- C. PROTECT ALL ITEMS WITHIN CONTRACT LIMITS NOT INDICATED TO BE REMOVED. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
- D. CONTACT THE LANDSCAPE ARCHITECT PRIOR TO REMOVING ANY PLANT MATERIAL NOT INDICATED TO BE PROTECTED OR REMOVED.
- E. CONTRACTOR TO PROVIDE ADEQUATE BARRICADES AND TRAFFIC CONTROL. COMPLY WITH REQUIREMENTS OF LOCAL JURISDICTION.
- F. CONTRACTOR SHALL SAW CUT ALL ASPHALT OR CONCRETE TO BE REMOVED TO THE NEAREST CONTROL JOINT WHERE PRACTICAL.
- G. PROTECT ALL ITEMS WITHIN CONTRACT LIMITS NOT INDICATED TO BE REMOVED. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

KEYNOTES

- A. REMOVE EXISTING ASPHALT
- B. REMOVE EXISTING CONCRETE SIDEWALK AND CURB
- C. REMOVE EXISTING VEGETATION
- D. REMOVE EXISTING FENCE
- E. REMOVE AND PRESERVE BENCHES (7)
- F. REMOVE AND PRESERVE TABLE SHADE STRUCTURE
- G. REMOVE TRASH BINS
- H. PRESERVE AND RELOCATE EXISTING TREES
- I. REMOVE BACKSTOP
- J. EXISTING MONUMENT SIGNAGE TO REMAIN
- K. REMOVE EXISTING PARKING BLOCK
- L. EXISTING BENCH TO REMAIN (3)



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Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

DEMOLITION PLAN

SP101

01 SP101 DEMOLITION PLAN



THE LINE SHOWN ABOVE IS
 WITHIN THE ORIGINAL PLAT
 SHEETS ORIGINAL PLAT SIZE

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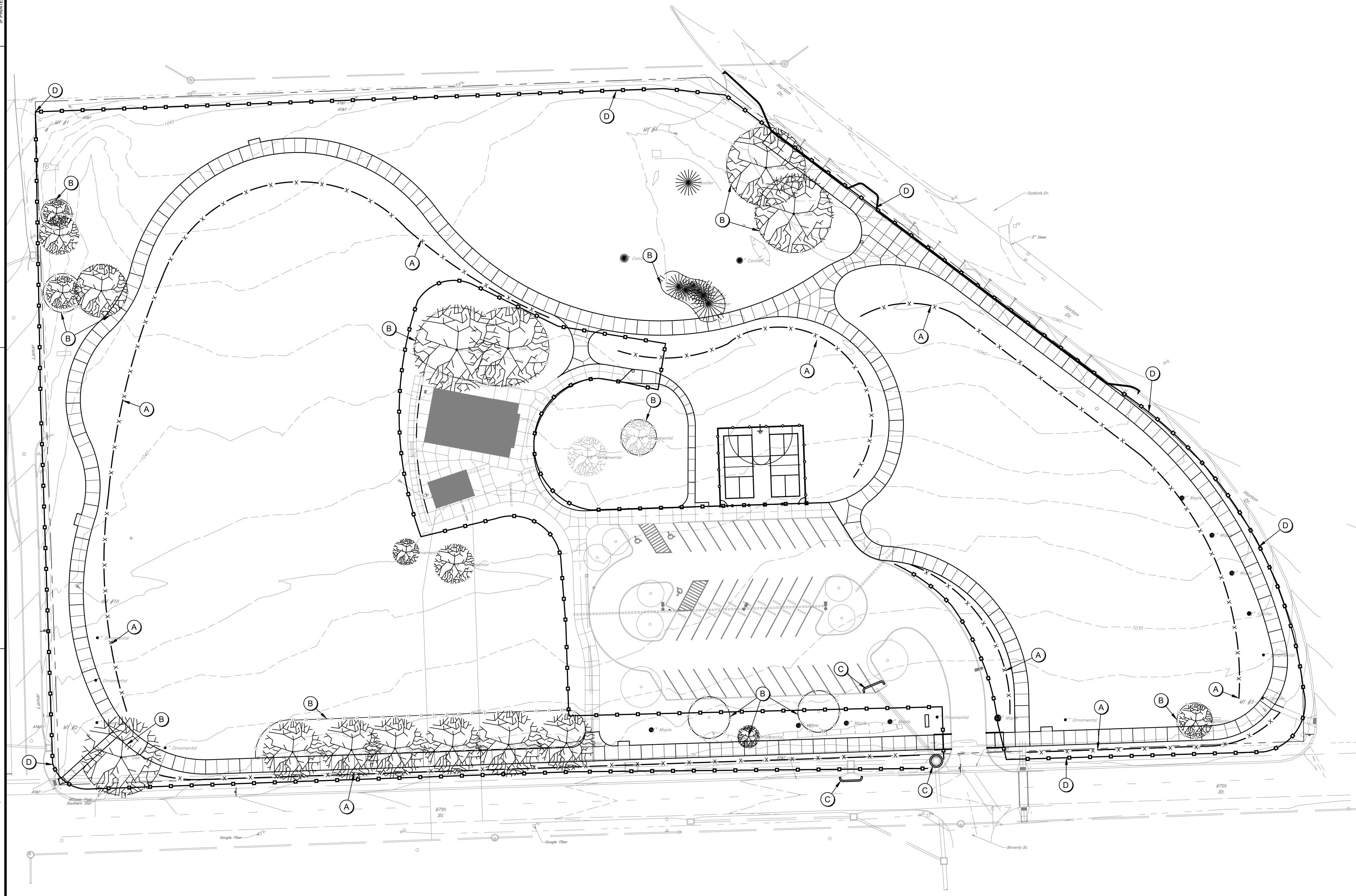
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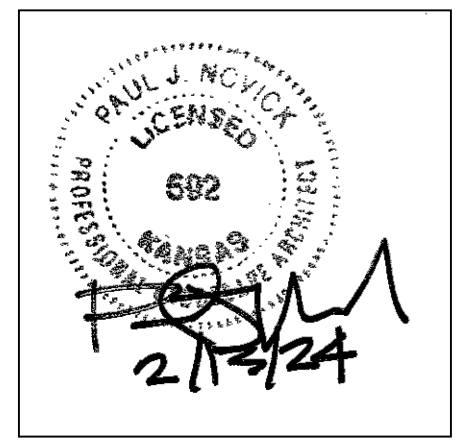
EROSION CONTROL GENERAL NOTES

- A. POTENTIAL SOURCES OF POLLUTION: SITE SOURCES OF POLLUTION GENERATED AS A RESULT OF THIS PROJECT RELATED TO SILTS AND SEDIMENT AND OTHER MATERIALS WHICH MAY BE TRANSPORTED AS A RESULT OF A STORM EVENT FROM THE CONSTRUCTION SITE.
- B. RESPONSIBILITY: THIS POLLUTION PREVENTION PLAN ILLUSTRATES GENERAL MEASURES TO BE TAKEN FOR COMPLIANCE WITH THE PERMIT. ALL MITIGATION MEASURES REQUIRED, AS A RESULT OF ACTIVITIES, ARE THE RESPONSIBILITY OF THE CONTRACTOR SHALL TAKE ALL ACTIONS NECESSARY FOR INSTALLATION OF CONTROL MEASURES FOR COMPLIANCE WITH PERMIT REQUIREMENTS.
- C. CONTROLS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL THE REQUIREMENTS OF THE GENERAL PERMIT INCLUDING BUT NOT LIMITED TO, THE FOLLOWING:
- D. THE CONTRACTOR SHALL PROTECT ADJOINING PROPERTY INCLUDING PUBLIC UTILITIES, SANITARY AND STORM DRAINAGE SYSTEMS AND STREETS FROM ANY DAMAGE RESULTING FROM MOVEMENT OF EARTH OR OTHER DEBRIS FROM PROJECT SITE. REPAIR ANY DAMAGE IMMEDIATELY AT NO ADDITIONAL COST.
- E. THE CONTRACTOR SHALL PREVENT ACCUMULATION OF EARTH, SILTATION OR DEBRIS ON ADJOINING PUBLIC OR PRIVATE PROPERTY FROM PROJECT SITE. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR PREVENTION.
- F. PRIOR TO SITE CLEARING AND GRADING OPERATIONS, CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROJECT ON THE DOWNSLOPE SIDES OF THE SITE AND EXCAVATE THE TEMPORARY SILTATION BASINS IN THE EXISTING DRAINAGE WAY AS SHOWN ON THE PLANS.
- G. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.
- H. A COMBINATION OF SILT FENCES, MULTIPLE SEDIMENT TRAPS OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL SIDE SLOPES AND DOWNSLOPE BOUNDARIES OF THE DISTURBED AREA.
- I. AS AREAS REACH THEIR FINAL GRADE AND UPON THE COMPLETION OF THE STORM SEWERS, PROVIDE ADDITIONAL SILTATION FENCE, TEMPORARY SILT BASINS, DIVERSION DIKES AND EARTH DIKES, SILT FENCE AND STRAW BALES WRAPPED WITH FILTER FABRIC, DITCH CHECKS AND SILT FENCE ENCLOSURES AROUND ALL STORM SEWER OUTFALLS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILTATION FENCE AND EARTH DIKES AS MAY BE REQUIRED ON ALL EMBANKMENTS, EARTH STOCKPILES AND OTHER AREAS TO PROVIDE CONTROL.
- J. THE CONTRACTOR SHALL PROVIDE TEMPORARY AND/OR PERMANENT SEEDING OF AREAS UPON COMPLETION OF GRADING AS SOON AS PRACTICAL. "FINAL STABILIZATION" MEANS ALL SOIL DISTURBING ACTIVITIES ARE COMPLETE AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A MINIMUM DENSITY OF 70% FOR THE AREA HAS BEEN ESTABLISHED OR AN EQUIVALENT STABILIZATION MEASURE.
- K. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA FOR AT LEAST 21 DAYS, THE AREA SHALL BE STABILIZED BY TEMPORARY EROSION CONTROLS WITHIN 14 DAYS OF CEASING CONSTRUCTION ACTIVITIES.
- L. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT AND SEDIMENT REMOVAL THROUGHOUT THE PERMIT PERIOD. CLEANING OF SILT CONTROL DEVICES SHALL BEGIN WHEN THE FEATURES HAVE LOST A MAXIMUM OF 50% OF THEIR CAPACITY.
- M. THE PROJECT AREA AND CONTROL DEVICES WILL BE INSPECTED BY PERSONNEL ASSIGNED BY THE CONTRACTOR EVERY SEVEN CALENDAR DAYS AND WITHIN 48 HOURS AFTER EACH RAIN EVENT OF 1/2" OR GREATER OR HEAVY SNOW MELT. THE FINDINGS AND ACTIONS TAKEN OF THIS INSPECTION SHALL BE RECORDED IN THE PROJECT DIARY WITH A COPY SUBMITTED WEEKLY TO THE OWNER DURING THE PROJECT. THIS PLAN MAY BE REVISED BASED UPON FINDINGS OF THE INSPECTION. THE CONTRACTOR SHALL IMPLEMENT ALL REVISIONS.
- N. CONTRACTOR TO PROVIDE NECESSARY DUST CONTROL MEASURES FOR THE SITE IN ACCORDANCE WITH CITY STANDARDS.
- H. TEMPORARY CONSTRUCTION FENCING TO BE REMOVED AS SECTIONS OF SITE ARE COMPLETED. CONTRACTOR TO PROVIDE PHASED WORK PLAN TO RE-OPEN AREAS.

KEYNOTES

- A. INSTALL SILT FENCE; RE: 07-08/SP400
- B. INSTALL CONSTRUCTION FENCE AROUND TREES TO BE PRESERVED; RE: 10-11/SP400
- C. INSTALL CONSTRUCTION WADDLE; RE: 04/SP400
- D. INSTALL CHAIN LINK CONSTRUCTION FENCE

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EROSION CONTROL PLAN

SP102



GENERAL NOTES

- A. IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE SURVEY AND FIELD CONDITIONS.
- B. THE CONTRACTOR SHALL NOTIFY THE 811 ONE CALL CENTER TO REQUEST THE LOCATION OF ALL UTILITIES WITHIN THE CONSTRUCTION AREA PRIOR TO ANY CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL PRIVATE UTILITIES NOT COVERED BY 811 ONE CALL. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
- C. CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF ALL EXISTING CONDITIONS, IMPROVEMENTS, VEGETATION AND UTILITIES TO REMAIN. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.
- D. THE CONTRACTOR SHALL CONSTRUCT ALL ITEMS WITHIN THIS CONTRACT IN ACCORDANCE WITH ALL STATE AND LOCAL CODES, REGULATIONS AND ENGINEERING STANDARDS. CONTRACTOR TO COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY OR STREETS WITH THE APPROPRIATE JURISDICTIONS.
- E. ALL WORK SHALL BE IN ACCORDANCE WITH OSHA CODES AND STANDARDS. NOTHING INDICATED ON THESE DRAWINGS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH ANY APPROPRIATE SAFETY REGULATIONS.
- F. NO SITE LIGHTING WILL BE INCORPORATED AT THIS TIME.

THE LINE SHOWN ABOVE IS THE ORIGINAL SCALE SIZE

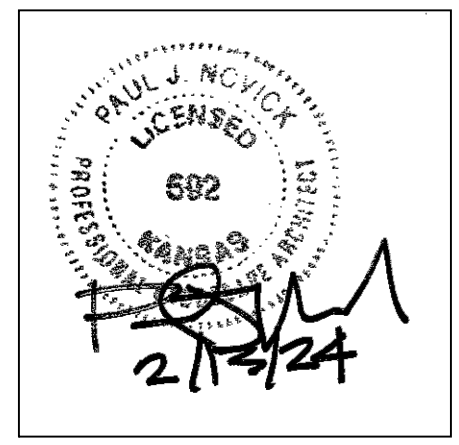
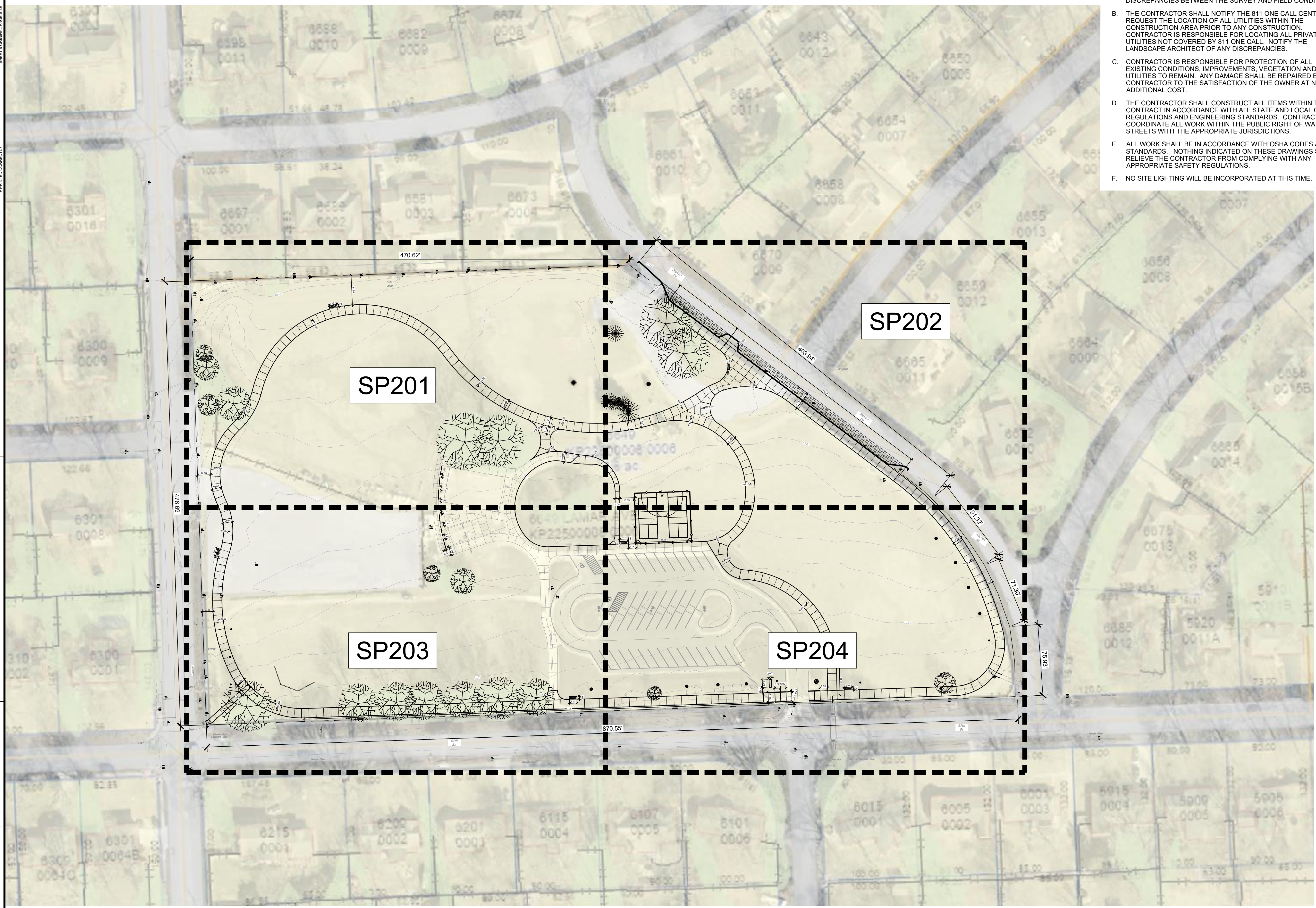
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THE SQUARES ABOVE ARE COLOR WITH PRINTING TO CORRECTLY. IF PRINTED CORRECTLY.

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MOHAWK PARK PHASE 2

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LAYOUT PLAN

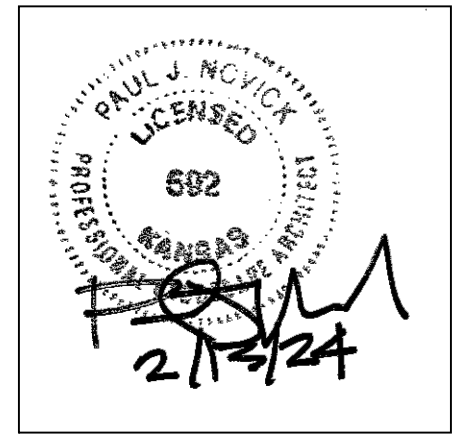
SP200



KEYNOTES

1. CONCRETE LOOP TRAIL; RE: 03/SP400
2. PLAYGROUND
3. BASKETBALL COURT (HALF) / 2 PICKLEBALL COURTS WITH REMOVABLE NETS; RE: 02/SP401
4. PICKLEBALL NET; RE:01/SP401
5. PLAY COURT FENCE; RE:12/SP400
6. PLAY COURT FENCE GATE; RE:11/SP400
7. BASKETBALL GOAL; RE:13/SP400
8. EXISTING PARKING LOT
9. ADA PARKING STALL/ STRIPING; RE:15/SP400
10. EMBEDDED SLEEVE FOR REMOVABLE LEANING BAR; RE:04/SP401
11. BENCH (PURCHASED BY OWNER, INSTALLED BY CONTRACTOR)
12. TRASH RECEPTACLE (PURCHASED BY OWNER, INSTALLED BY CONTRACTOR)
13. BACKSTOP RE:03/SP401
14. CURB RE:06/SP400
15. ASPHALT PARKING RE:SP403

#	Position X	Position Y
SP201-01	2261919.10	263363.38
SP201-02	2261924.26	263474.63
SP201-03	2261967.09	263513.62
SP201-04	2262161.08	263554.40
SP201-05	2262246.53	263488.19
SP201-06	2262200.09	263439.17
SP201-07	2262301.90	263444.84



Revision Schedule

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MOHAWK PARK PHASE 2

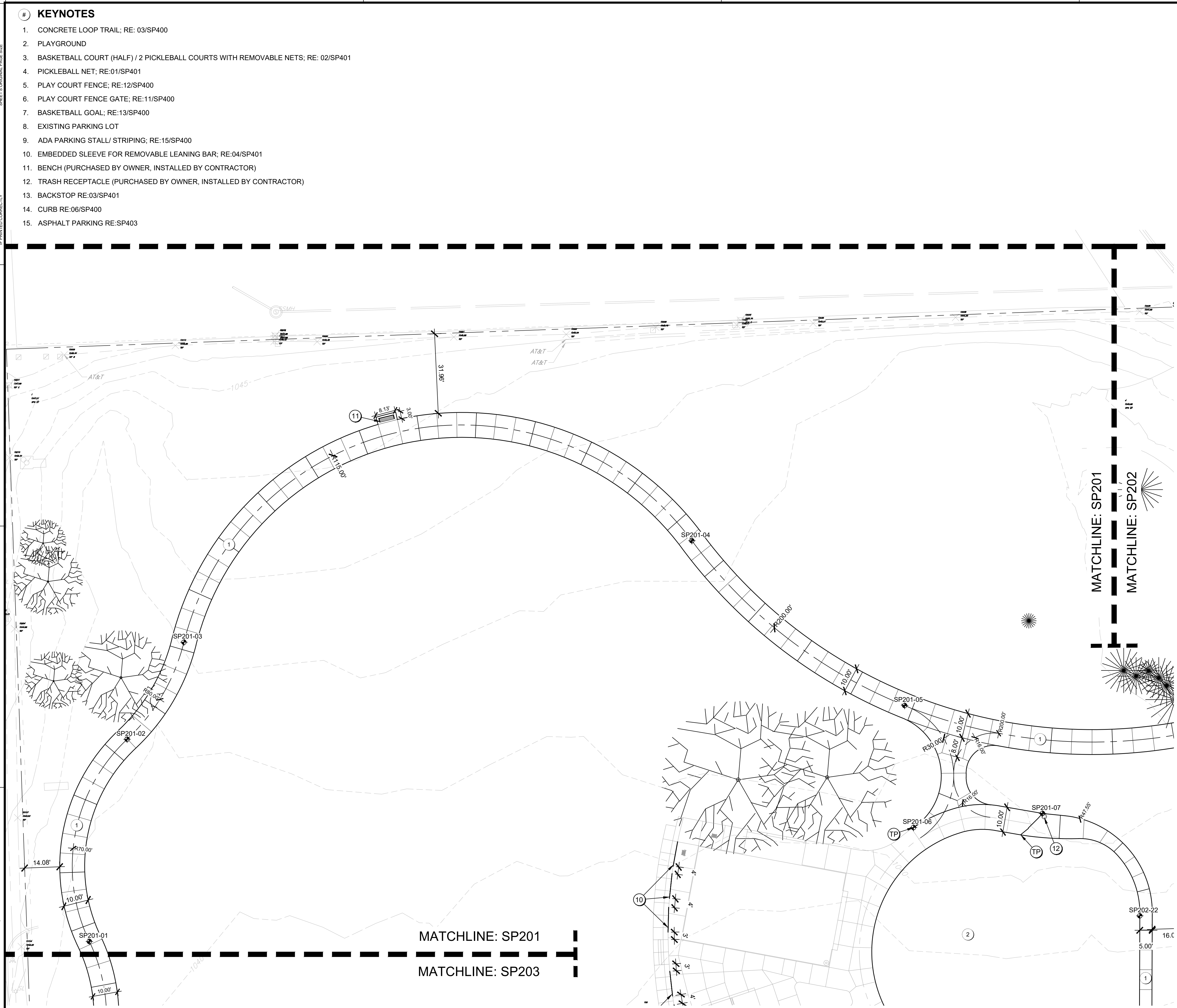
MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
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LAYOUT PLAN
 ENLARGEMENT

SP201

THE LINE SHOWN ABOVE IS WITH THE ORIGINAL SCALE SIZE. THE SQUARES ABOVE ARE COLOR WITH THE ORIGINAL SCALE SIZE. IF PROVIDED CORRECTLY.



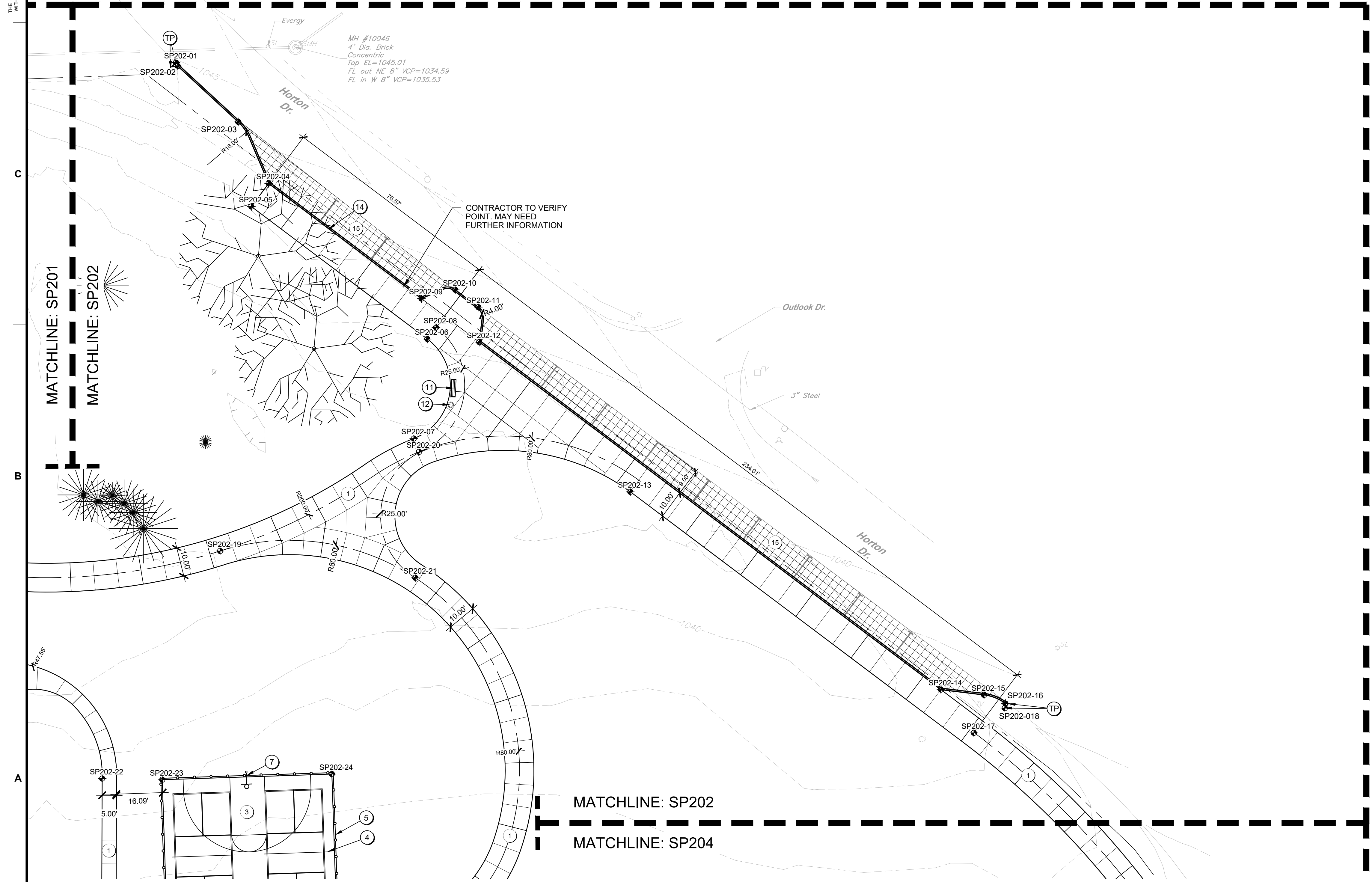
02 SP201 LAYOUT PLAN ENLARGEMENT



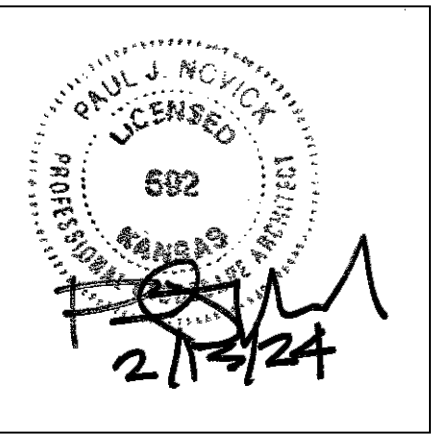
KEYNOTES

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3. BASKETBALL COURT (HALF) / 2 PICKLEBALL COURTS WITH REMOVABLE NETS; RE: 02/SP401
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15. ASPHALT PARKING RE:SP403

THE LINE SHOWN ABOVE IS
 WITHIN THE ORIGINAL PLANS
 IF PRINTED CORRECTLY.
 THE SQUARES ABOVE ARE COLOR
 WITHIN THE ORIGINAL PLANS
 IF PRINTED CORRECTLY.



#	Position X	Position Y
SP203-01	2261922.57	263341.55
SP203-02	2261933.63	263210.41
SP203-03	2261939.86	263192.31
SP203-04	2261904.02	263159.88
SP203-05	2261908.23	263156.95
SP203-06	2261943.21	263188.61
SP203-07	2262007.26	263167.51
SP203-08	2262259.40	263181.11
SP203-09	2262269.06	263191.08
SP203-10	2262279.06	263192.10
SP203-11	2262291.99	263184.23



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 Date YYYY-MM-DD

LAYOUT PLAN
 ENLARGEMENT

SP202

03 SP202 LAYOUT PLAN ENLARGEMENT

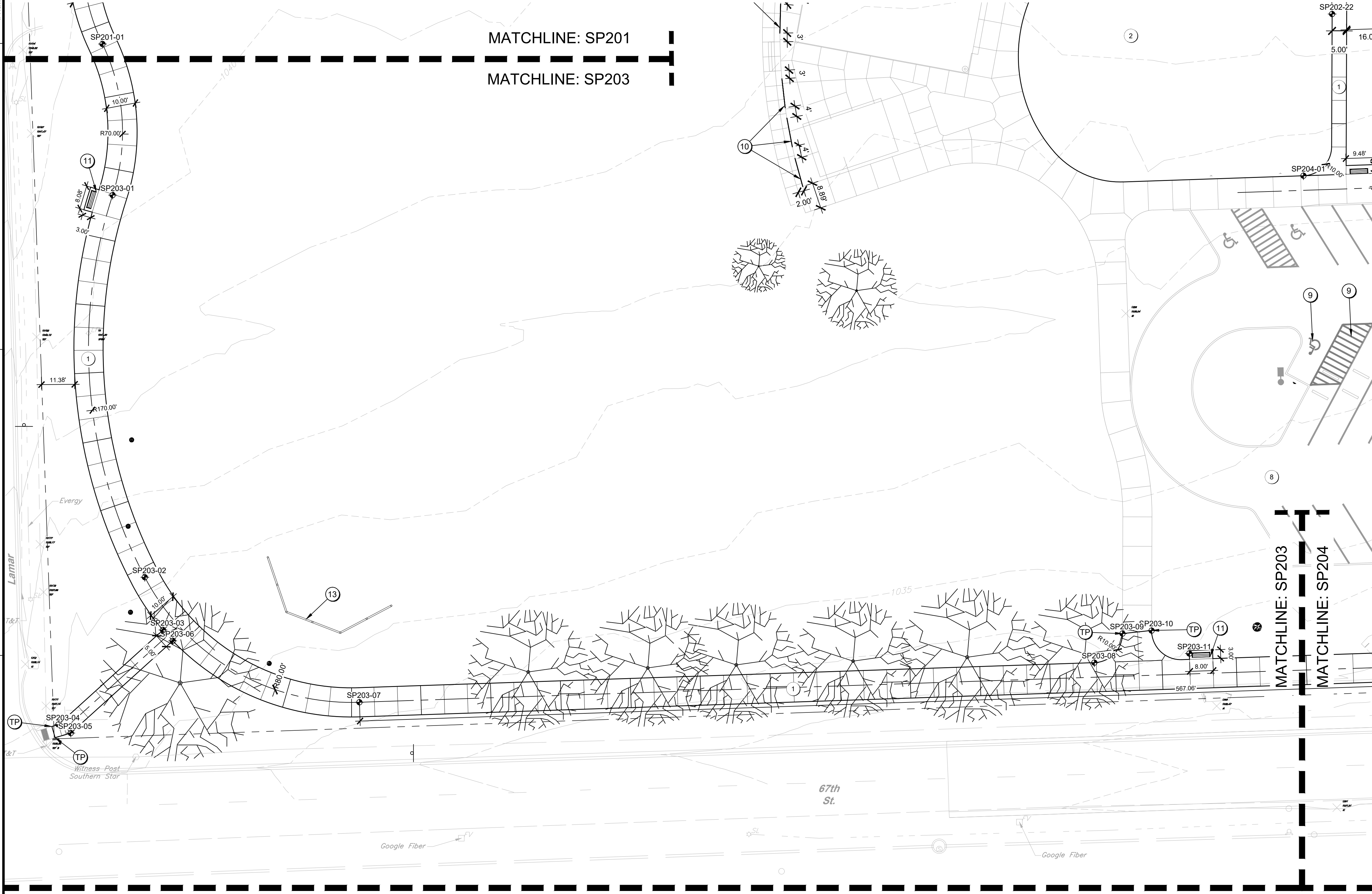


KEYNOTES

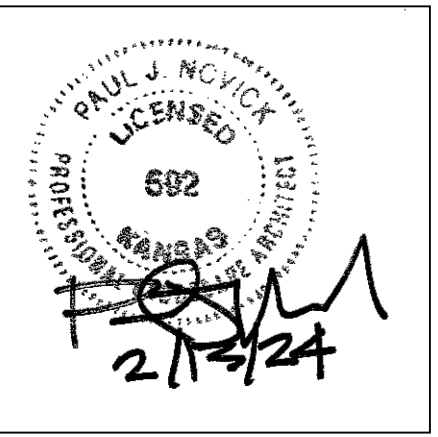
1. CONCRETE LOOP TRAIL; RE: 03/SP400
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14. CURB RE:06/SP400
15. ASPHALT PARKING RE:SP403

THE LINE SHOWN ABOVE IS WITH THE ORIGINAL SCALE SIZE. THE SQUARES ABOVE ARE COLOR WITH THE ORIGINAL SCALE SIZE. IF PROVIDED CORRECTLY.

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#	Position X	Position Y
SP203-01	2261822.57	263341.55
SP203-02	2261893.63	263210.41
SP203-03	2261939.86	263182.31
SP203-04	2261904.02	263159.88
SP203-05	2261908.23	263155.95
SP203-06	2261943.21	263188.61
SP203-07	2262007.26	263187.51
SP203-08	2262259.40	263181.11
SP203-09	2262289.06	263191.08
SP203-10	2262278.06	263182.10
SP203-11	2262291.99	263184.23



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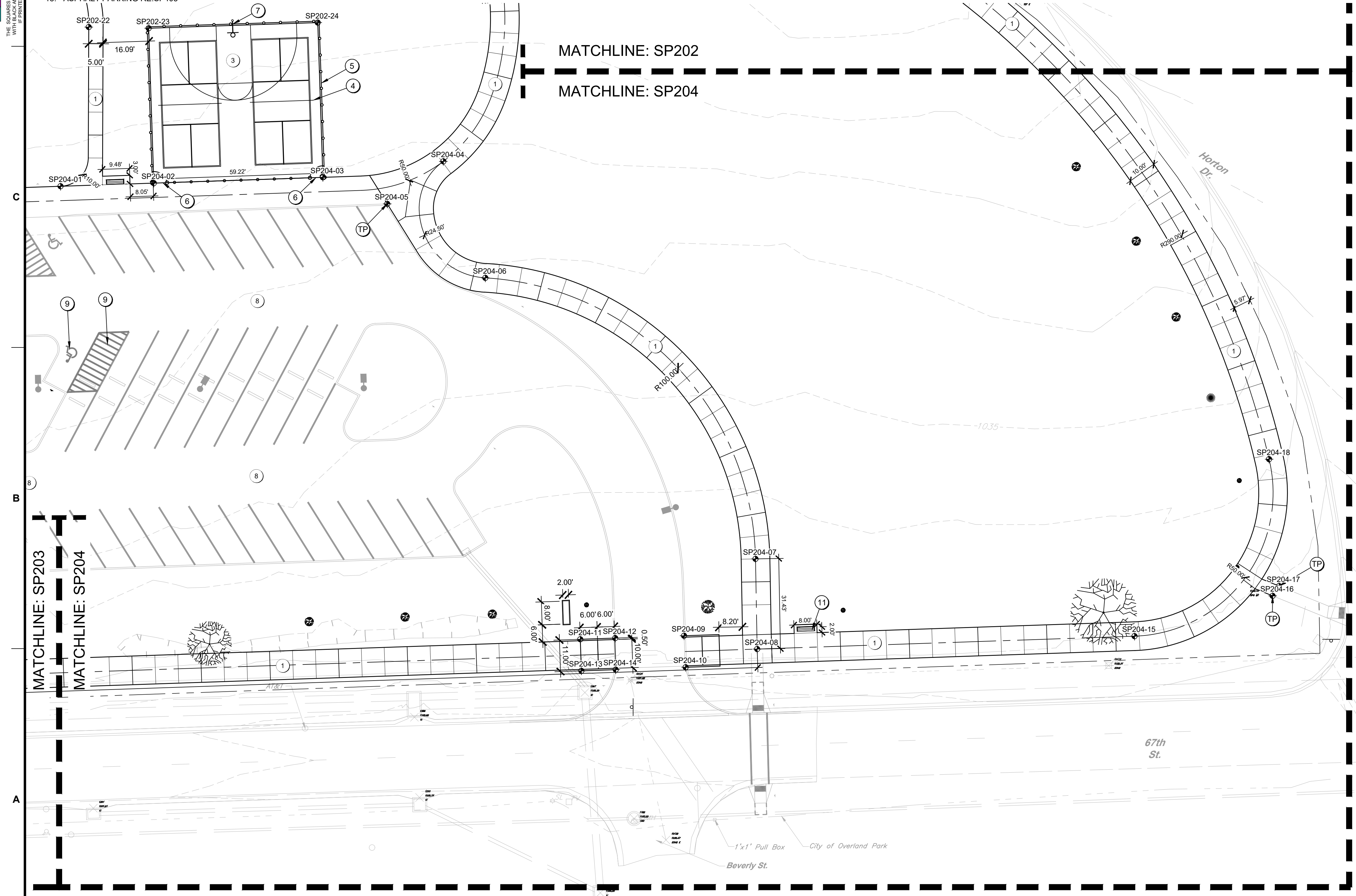
LAYOUT PLAN
 ENLARGEMENT

SP203

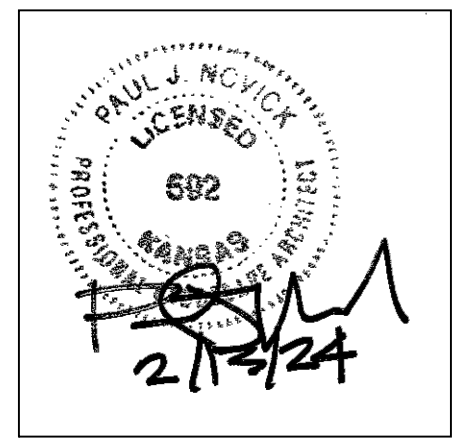


- # KEYNOTES
1. CONCRETE LOOP TRAIL; RE: 03/SP400
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 14. CURB RE:06/SP400
 15. ASPHALT PARKING RE:SP403

THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL OR A
 COPY OF THE ORIGINAL
 SHEET'S ORIGINAL SCALE SIZE
 THE SQUARES ABOVE ARE COLOR
 WITH A PRINTING DEFECT
 IF PRINTED CORRECTLY



#	Position X	Position Y
SP204-01	226231.15	263348.19
SP204-02	2262363.66	263349.29
SP204-03	2262422.60	263351.30
SP204-04	2262464.60	263356.87
SP204-05	2262445.04	263343.05
SP204-06	2262479.23	263316.25
SP204-07	2262573.41	263218.26
SP204-08	2262573.99	263186.84
SP204-09	2262548.51	263191.47
SP204-10	2262549.07	263180.48
SP204-11	2262512.33	263180.24
SP204-12	2262524.02	263180.65
SP204-13	2262512.71	263179.24
SP204-14	2262524.70	263179.65
SP204-15	2262705.55	263181.32
SP204-16	2262733.68	263205.39
SP204-17	2262755.93	263208.80
SP204-18	2262792.45	263203.04



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LAYOUT PLAN
 ENLARGEMENT

SP204

05 SP204 LAYOUT PLAN ENLARGEMENT



THE LINE SHOWN ABOVE IS
EITHER A CENTERLINE OR
EDGE OF ORIGINAL GRADE SIZE

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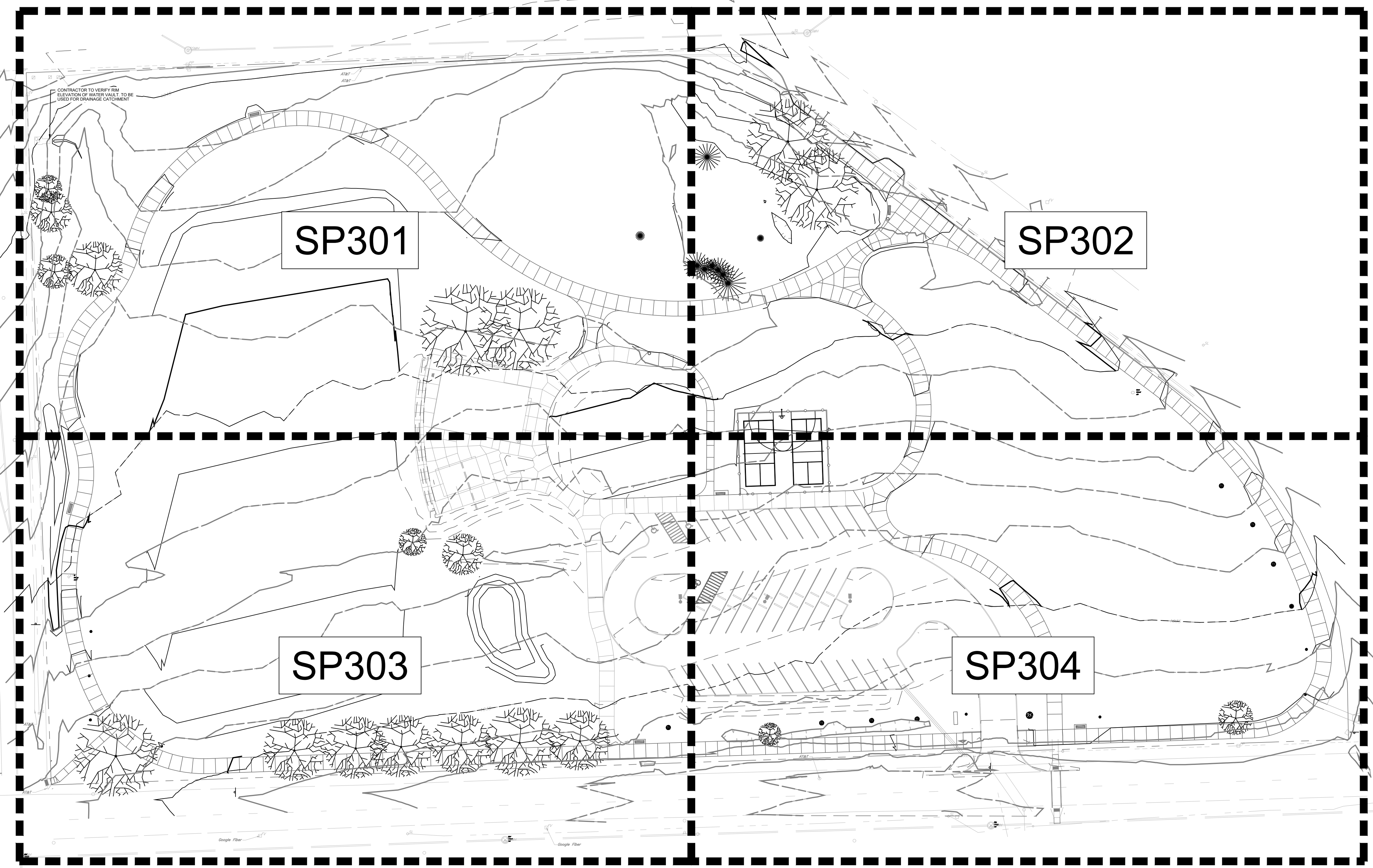
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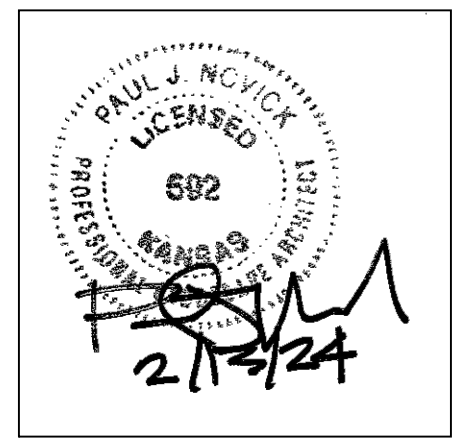


GRADING NOTES

- A. ALL SPOT ELEVATIONS ARE AT THE TOP OF FINISHED SURFACES UNLESS NOTED OTHERWISE. SPOT ELEVATIONS SHOWN IN PARKING ARE AT THE BOTTOM OF CURB. ADD 6" TO COMPUTE TOP OF CURB ELEVATION.
- B. CONTRACTOR TO VERIFY ALL SPOT ELEVATIONS FOR POSITIVE DRAINAGE BEFORE INSTALLATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE SURFACE DRAINAGE IN ALL AREAS, UNLESS OTHERWISE NOTED. ALL NEWLY GRADED GROUND SURFACES SHALL BE FINISHED TO UNIFORM GRADES AND SLOPED IN SUCH A MANNER TO BE FREE OF DEPRESSIONS THAT CAUSE AREAS OF STANDING WATER. THE CONTRACTOR SHALL REPORT ANY CONFLICTS WITH THIS REQUIREMENT TO THE LANDSCAPE ARCHITECT FOR RESOLUTION PRIOR TO FINAL GRADING OPERATIONS.
- C. WALK CROSS SLOPE MAY NOT EXCEED 2.0%. RUNNING SLOPE MAY NOT EXCEED 5.0%. RUNNING SLOPE FOR RAMPS MAY NOT EXCEED 1:12 WITH LANDINGS THAT DO NOT EXCEED 2.0% IN ANY DIRECTION.
- D. WHERE PROPOSED GRADES MEET EXISTING, BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN THE NEW WORK AND EXISTING WORK. PONDING AT JOINTS WILL NOT BE ACCEPTED.
- E. CONTACT LANDSCAPE ARCHITECT PRIOR TO BACKFILLING AGAINST EXISTING BUILDINGS. PROVIDE WATERPROOFING WHEN BACKFILLING AGAINST EXISTING BUILDINGS.
- F. FINAL BERM SHAPE TO BE APPROVED BY LANDSCAPE ARCHITECT.
- G. SEE SPECIFICATIONS FOR MINIMUM DEPTH OF TOPSOIL FOR ALL LAWN AREAS AND PLANTING BEDS.
- H. DEBRIS SHALL BE REMOVED AND PAVEMENT WITHIN THE RIGHT-OF-WAY SWEEPED AT THE END OF EACH WORKING DAY.
- I. CONTRACTOR TO FIELD ADJUST ALL EXISTING SITE UTILITIES TO NEW FINISHED GRADES. EXISTING UTILITIES INCLUDE, BUT ARE NOT LIMITED TO, FIRE HYDRANTS, MANHOLE RIMS, INLETS, WATER VALVES, AND LIGHT BASES.
- J. SILT FENCE AND INLET PROTECTION SHALL BE MAINTAINED UNTIL ESTABLISHMENT OF PERMANENT GROUND COVER.



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GRADING PLAN

SP300

01
 SP300 GRADING PLAN



THE LINE SHOWN ABOVE IS
 ENLARGED FROM THE ORIGINAL
 SHEET'S ORIGINAL SCALE SIZE

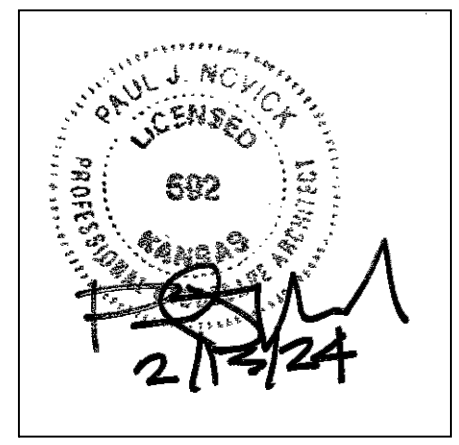
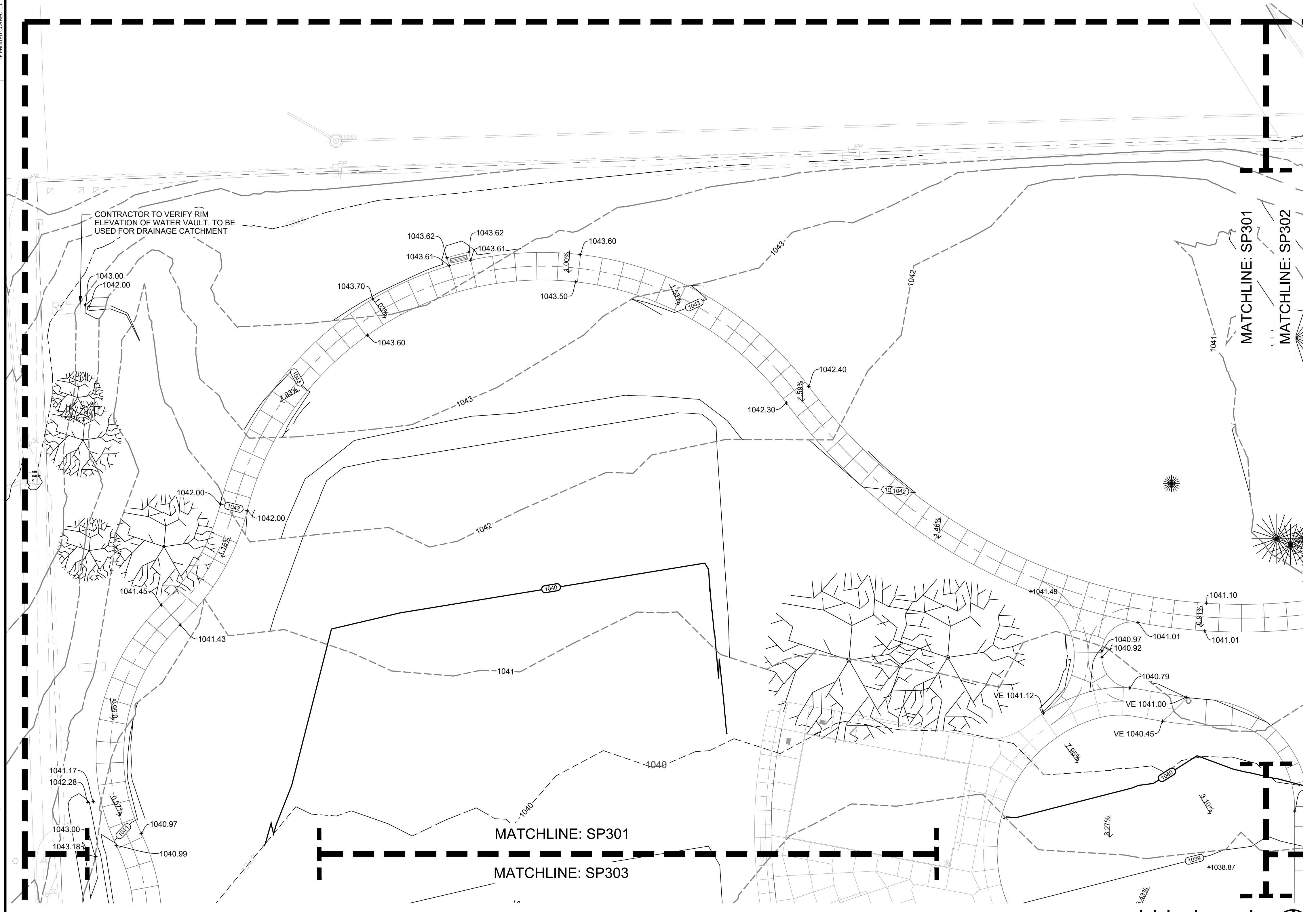
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THE SQUARES ABOVE ARE COLOR
 WITH THE ORIGINAL SHEET.
 IF PROVIDED CORRECTLY,
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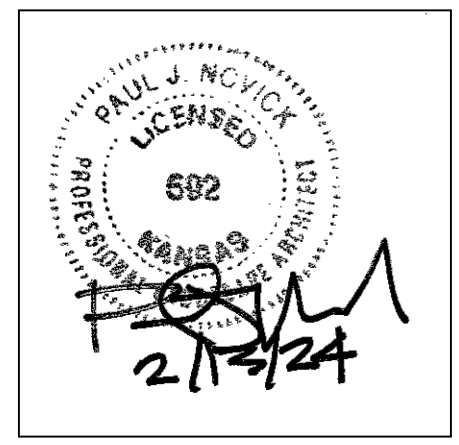
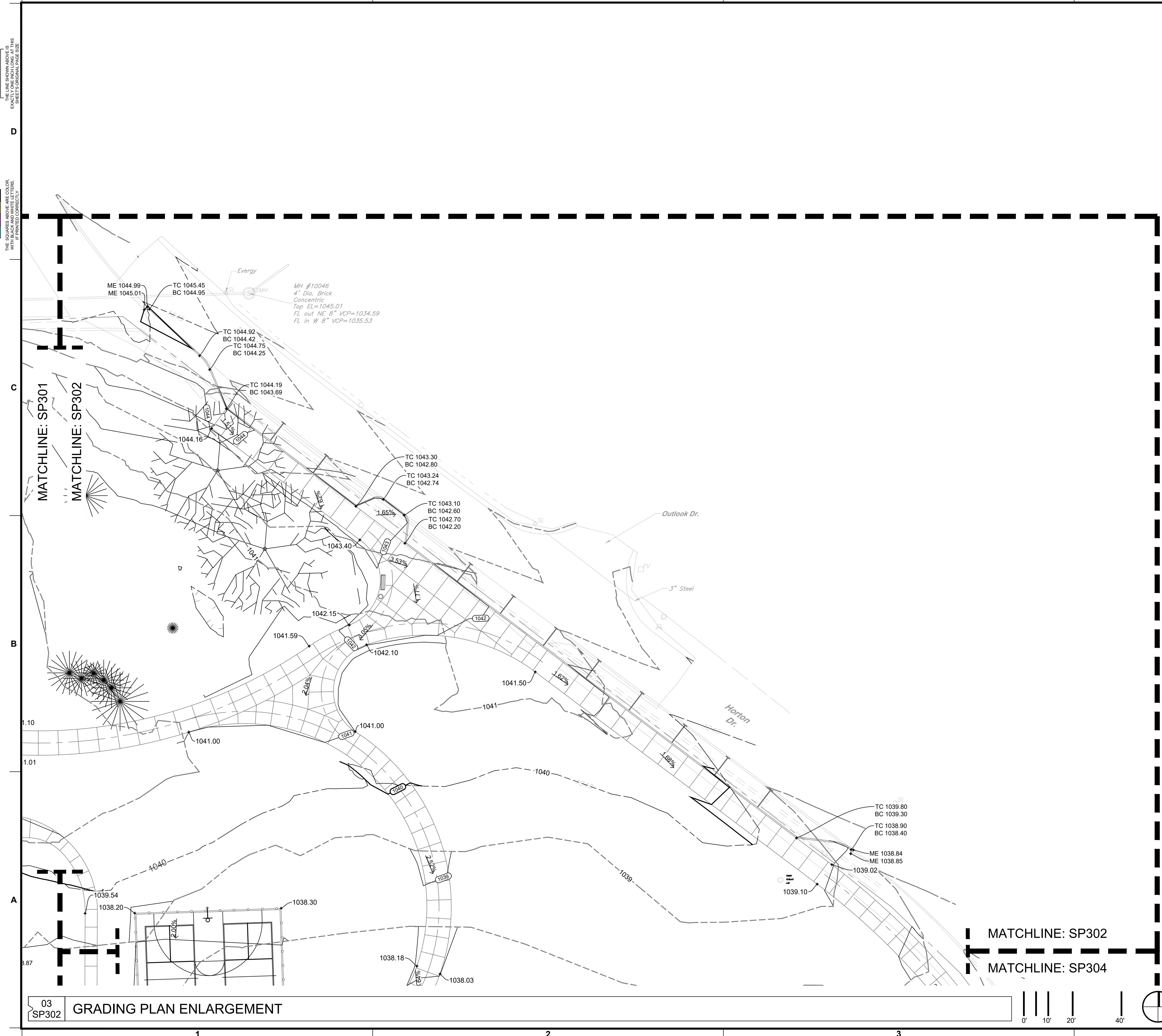
GRADING PLAN
 ENLARGEMENT

SP301

02 SP301 GRADING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL SIZE OR
 SHEET'S ORIGINAL SIZE

THE SQUARES ABOVE ARE COLOR
 WITH AN ORIGINAL SIZE OF
 IF PRINTED CORRECTLY



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2
MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

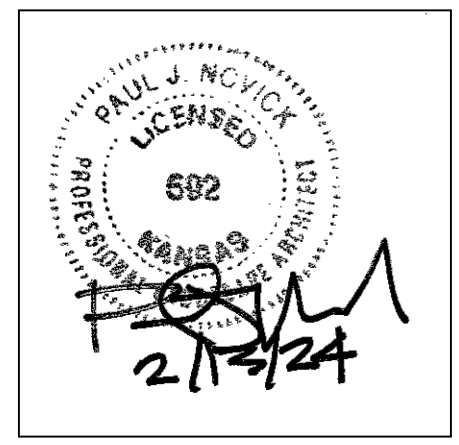
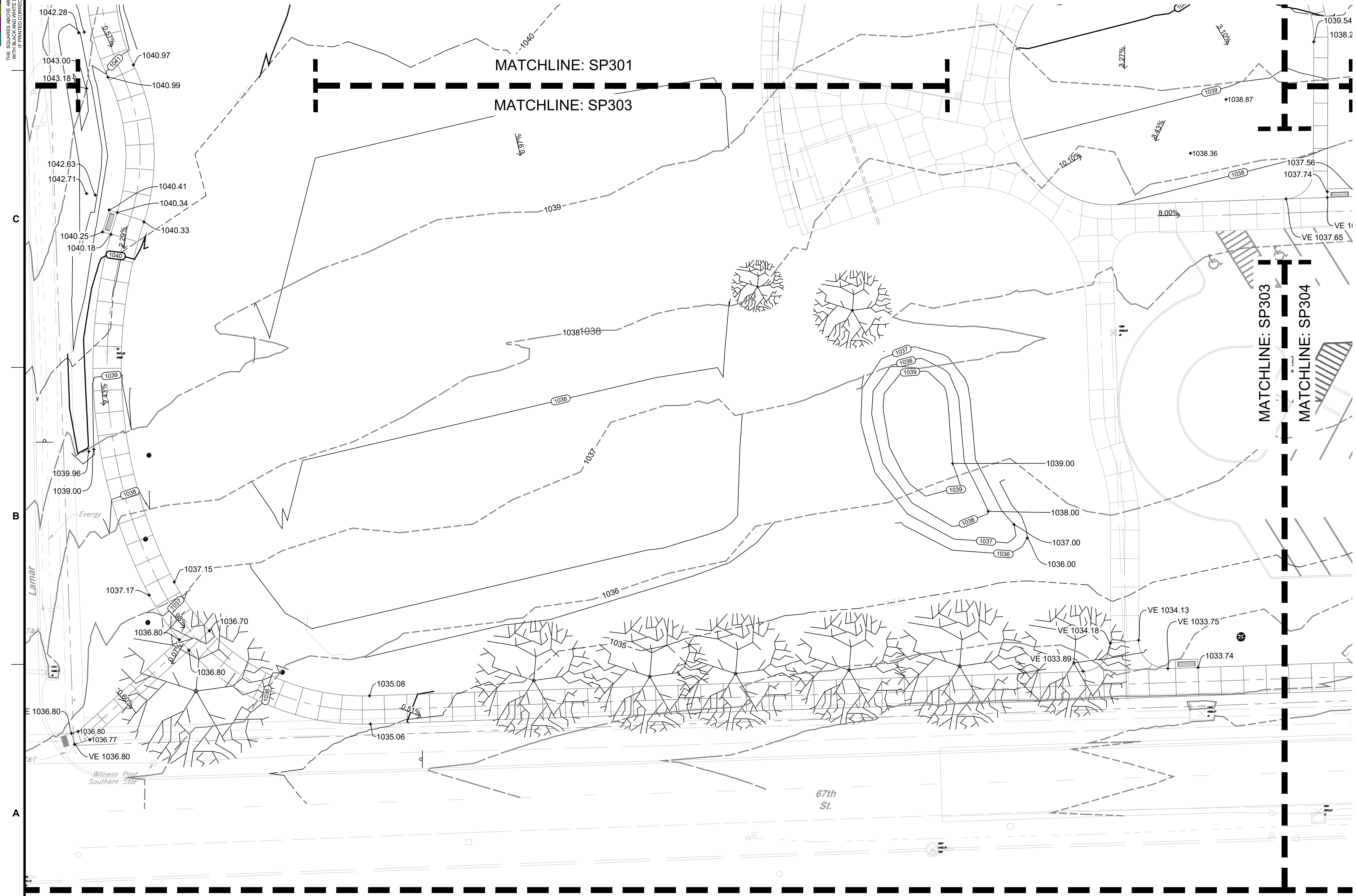
**GRADING PLAN
 ENLARGEMENT**

SP302

03 SP302 GRADING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS
 ENLARGED FOR CLARITY.
 IF PROVIDED CORRECTLY,
 THE SQUARES ABOVE ARE COLOR
 WITH NO LINE CORRECTLY.

C M Y K



Revision Schedule

No.	Date	Description
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 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
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Date	YYYY-MM-DD

GRADING PLAN
 ENLARGEMENT

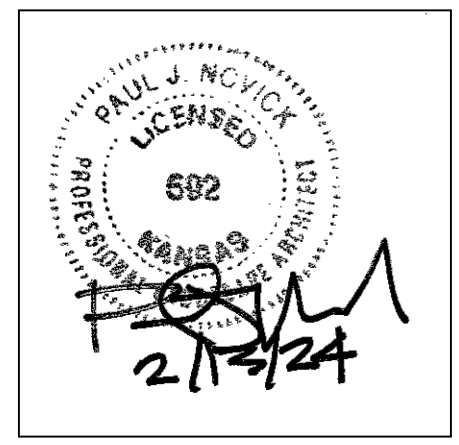
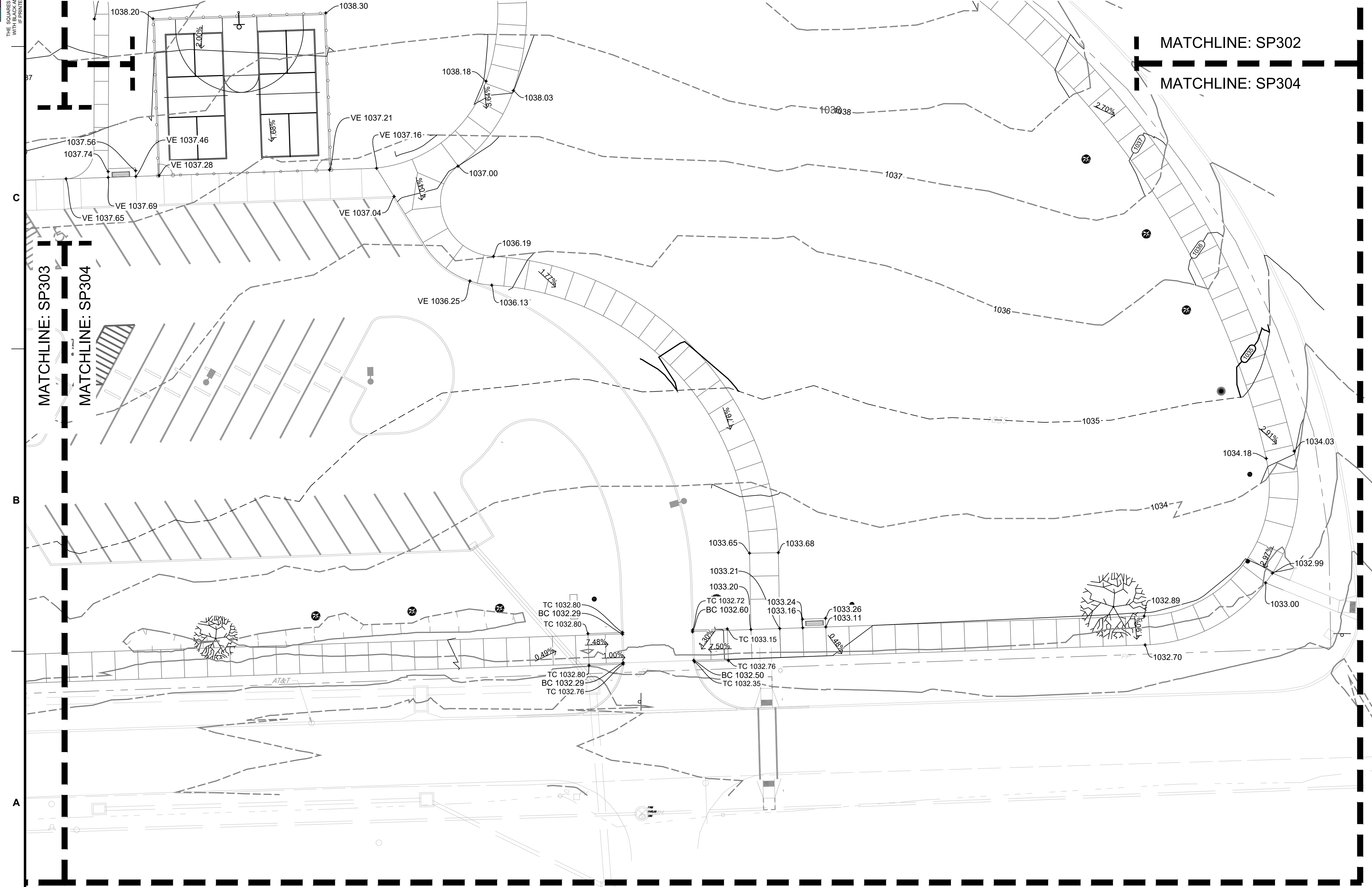
SP303

04 SP303 GRADING PLAN ENLARGEMENT



THE LINE SHOWN ABOVE IS ENLARGED FROM THE ORIGINAL SIZE

THE SQUARES ABOVE ARE COLOR WITH AN UNIFORM PATTERN. IF PRINTED CORRECTLY, THE SQUARES SHOULD APPEAR AS SHOWN.



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Project Number	23093
Issue	00000
Date	YYYY-MM-DD

GRADING PLAN
 ENLARGEMENT

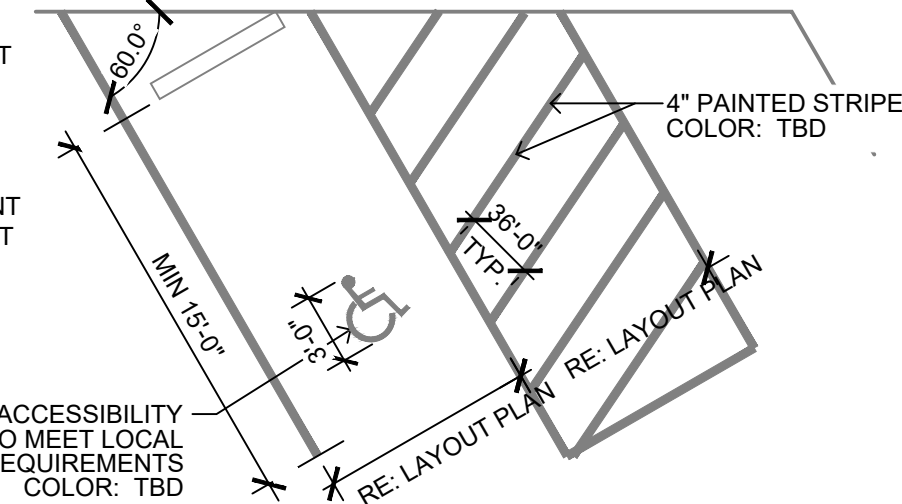
SP304

05 SP304 GRADING PLAN ENLARGEMENT

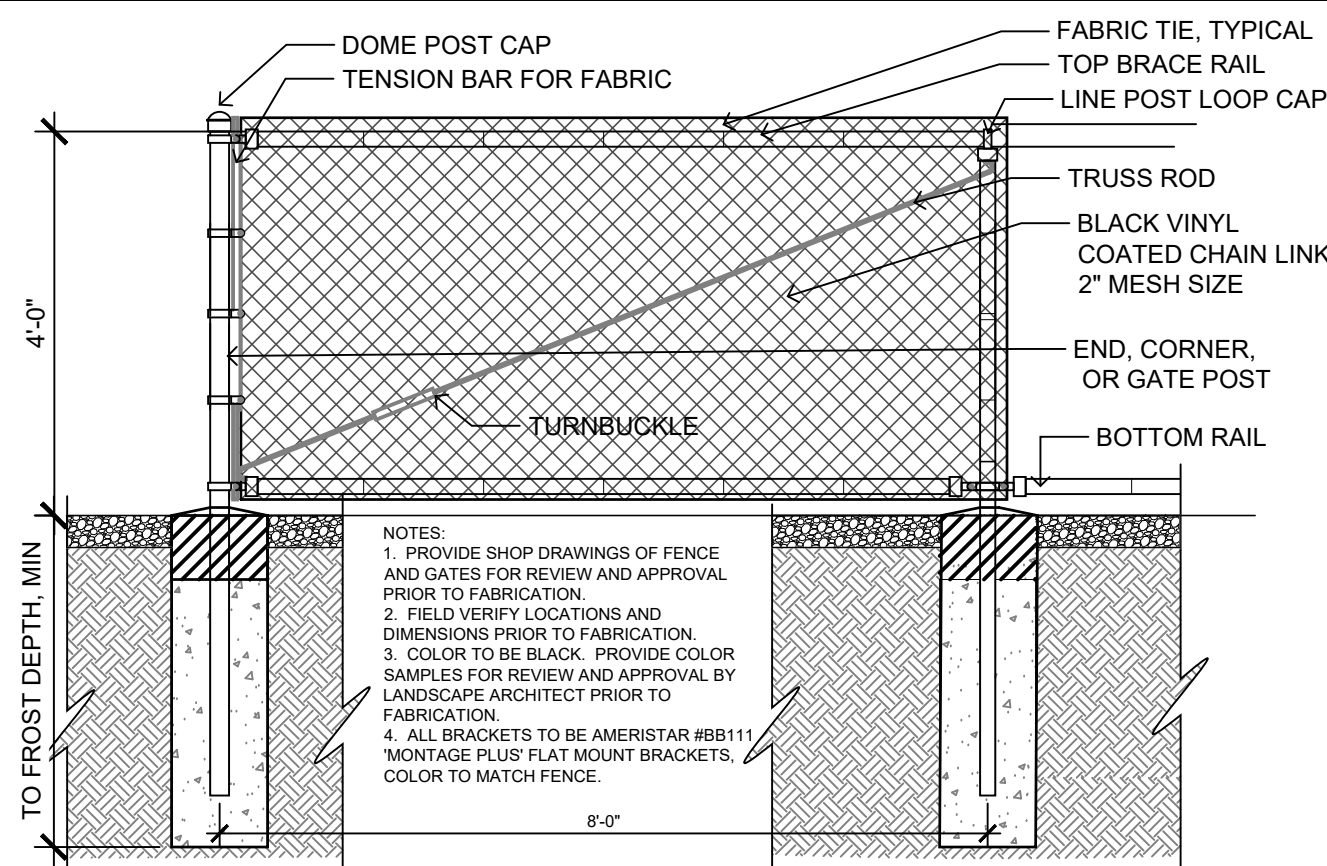


THE LINE SHOWN ABOVE IS WITH ORIGINAL SCALE SIZE. SHEETS ORIGINAL SCALE SIZE.
 THE SQUARES ABOVE ARE COLOR WITH ORIGINAL SCALE SIZE. IF PROVIDED CORRECTLY.

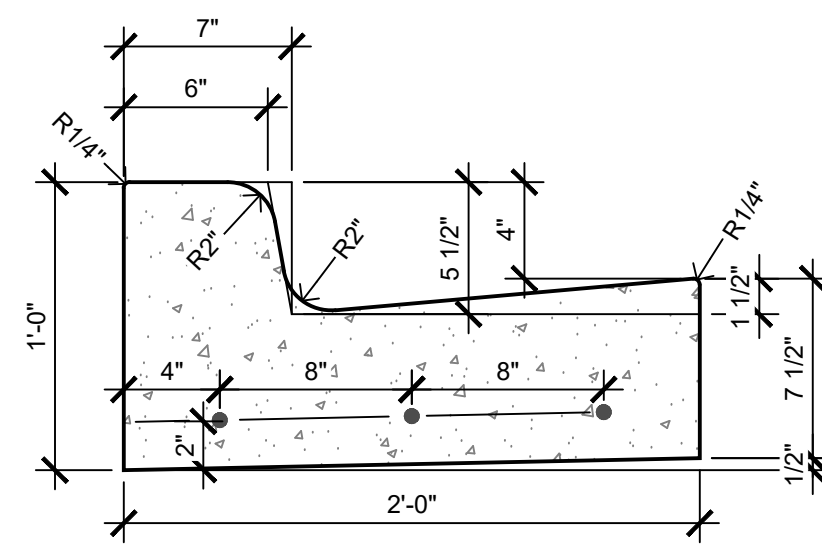
- PAVEMENT PAINT SPECS**
- MPT #32 ALKYD TRAFFIC PAINT
 - VERIFY LAYOUT AND COLOR WITH ARCHITECT
 - SWEEP AND CLEAN PAVEMENT PRIOR TO PAINTING
 - APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS WITH UNIFORM, STRAIGHT EDGES
 - APPLY 2 COATS



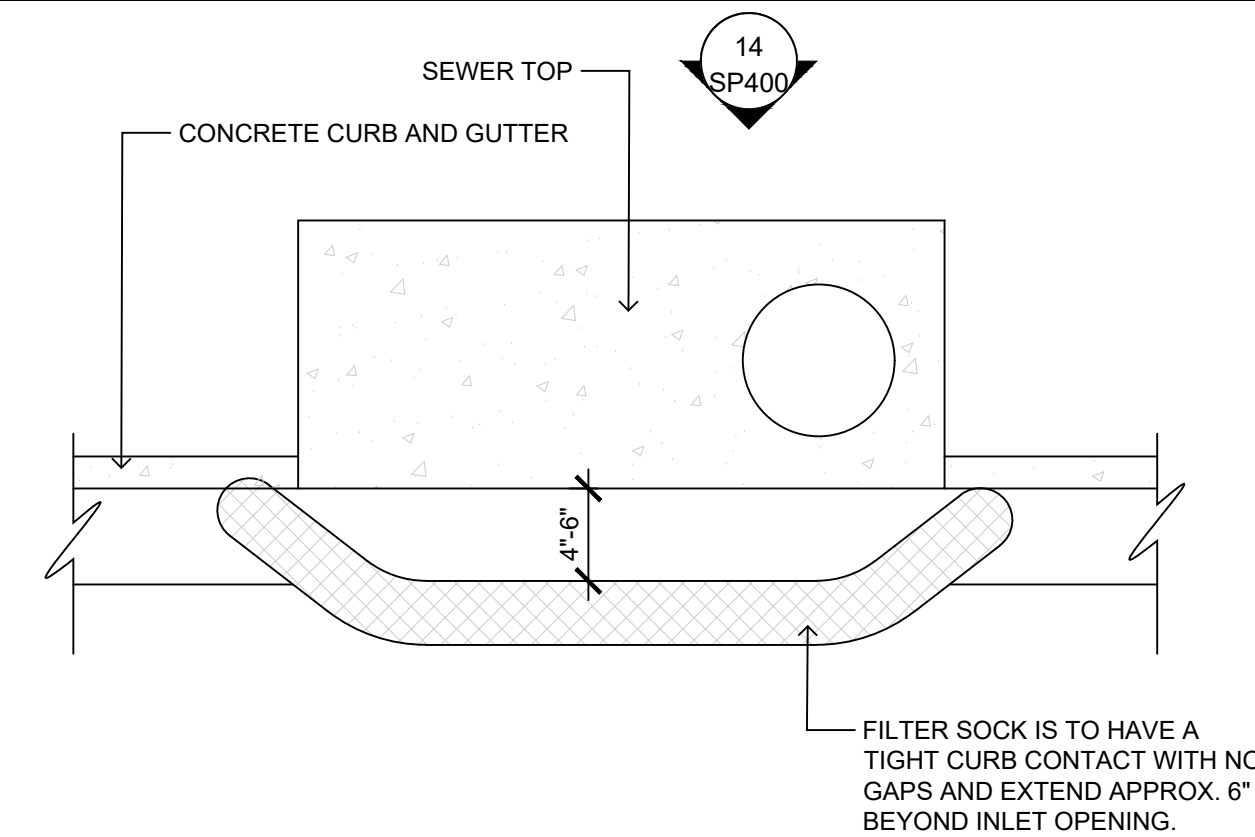
15 SP400 PLAN: ADA PARKING STRIPING SCALE: 1/4" = 1'-0"



12 SP400 SECTION: 4'-0" BLACK VINYL CHAINLINK SCALE: 1/2" = 1'-0"

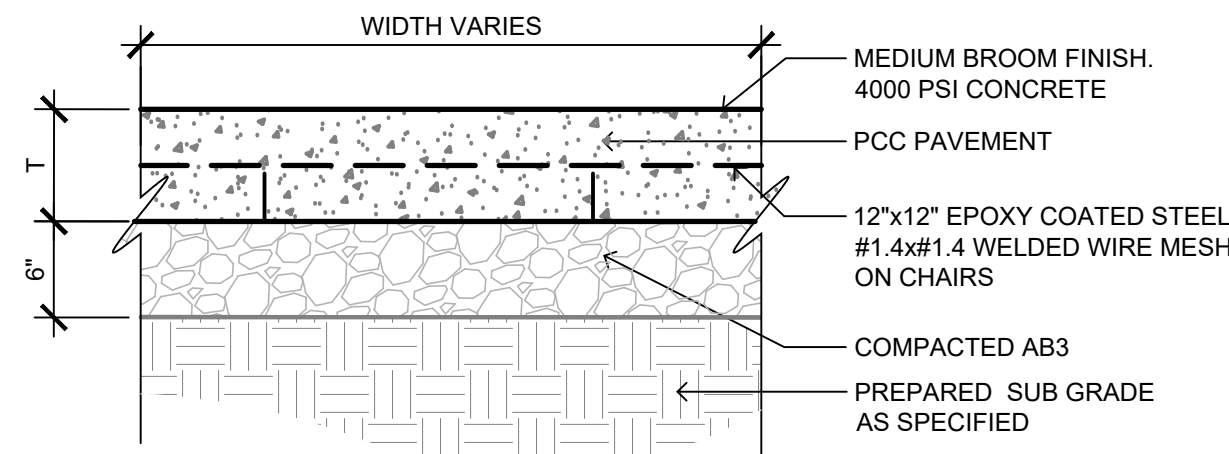


08 SP400 SECTION: CONCRETE CURB SCALE: 1 1/2" = 1'-0"



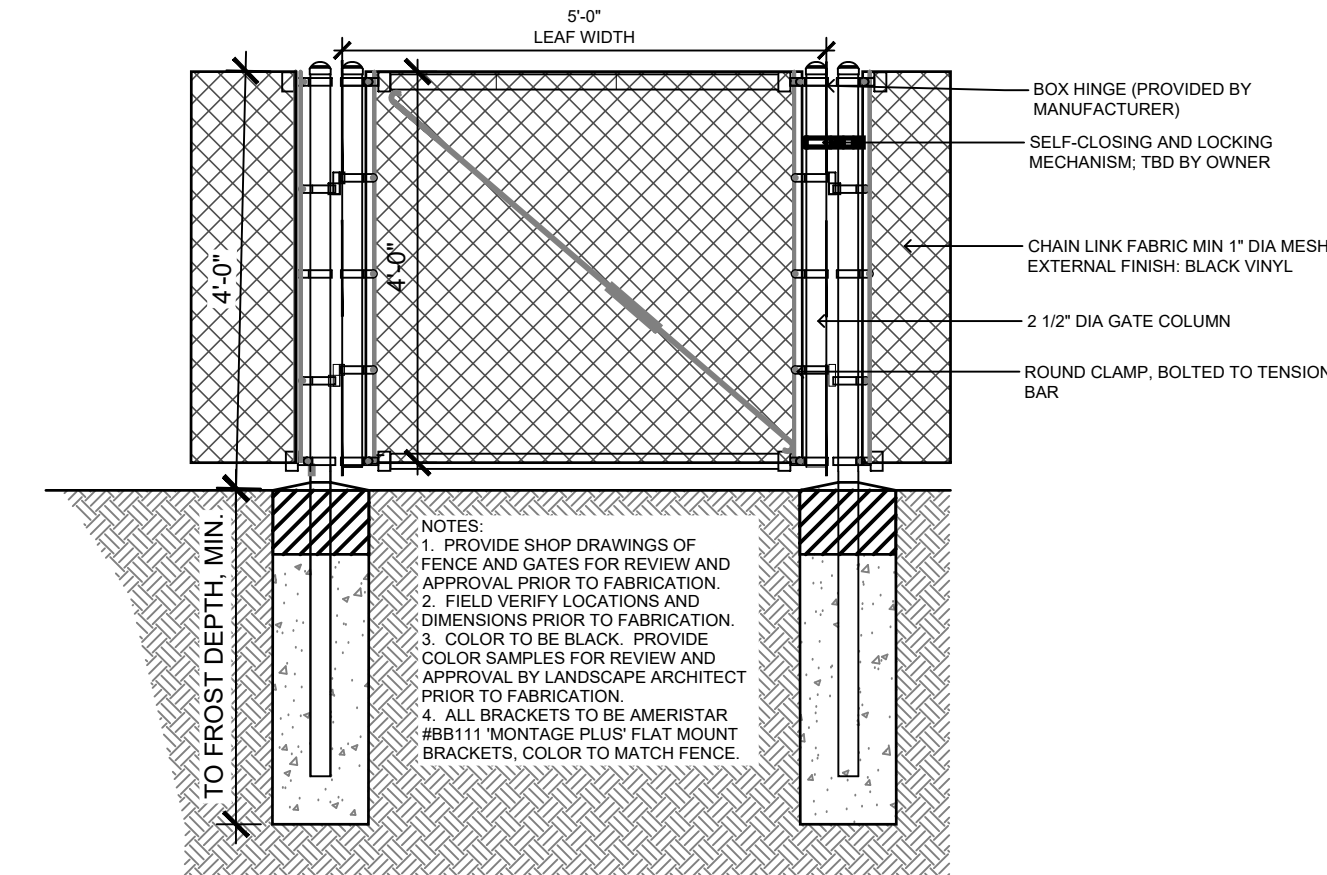
04 SP400 PLAN: SUMP INLET FILTER SCALE: 1" = 1'-0"

T = PAVEMENT THICKNESS (RE: SITE PLANS)

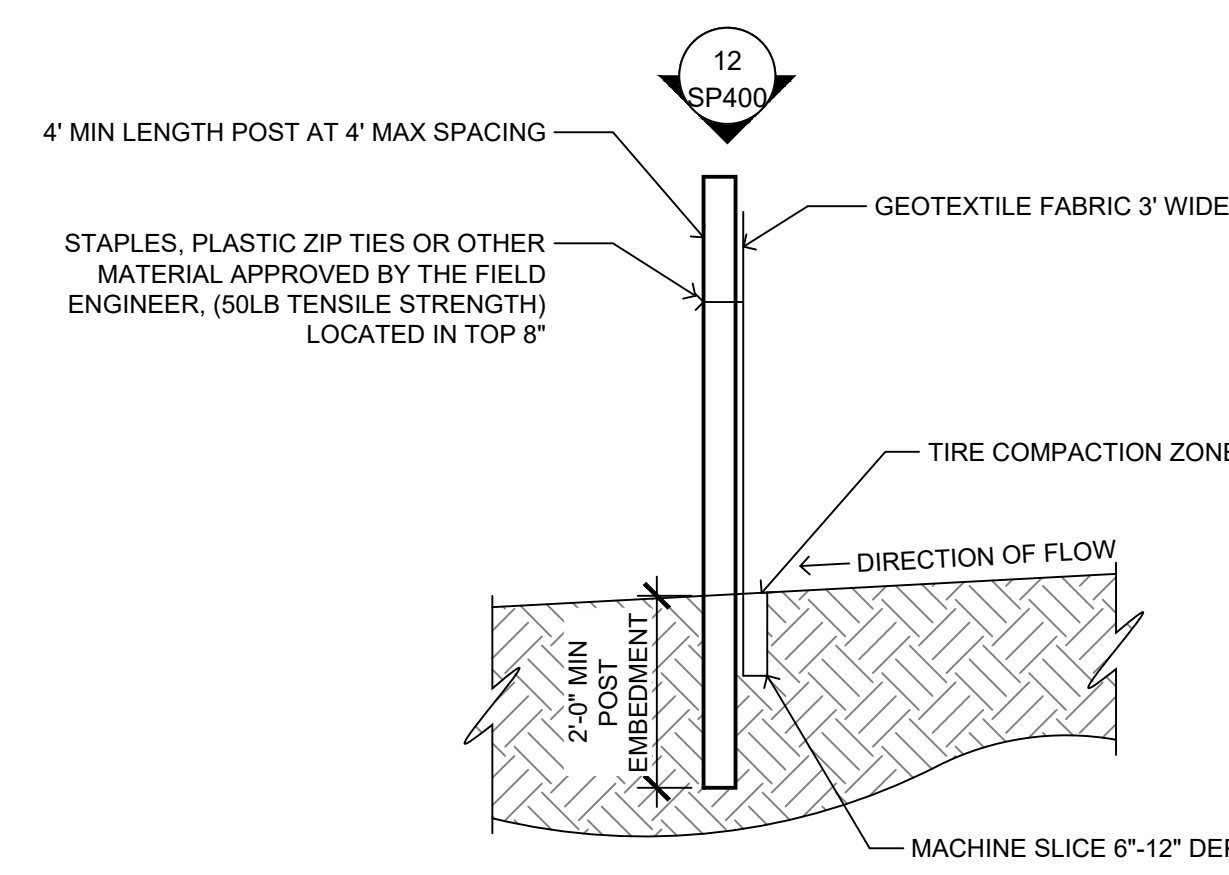


- NOTES:**
1. CROSS SLOPE NOT TO EXCEED 2.0%.
 2. CONTROL JOINTS TO OCCUR AT SPACING EQUAL TO WIDTH OF SLAB UNLESS INDICATED ON PLAN OR BY LANDSCAPE ARCHITECT.

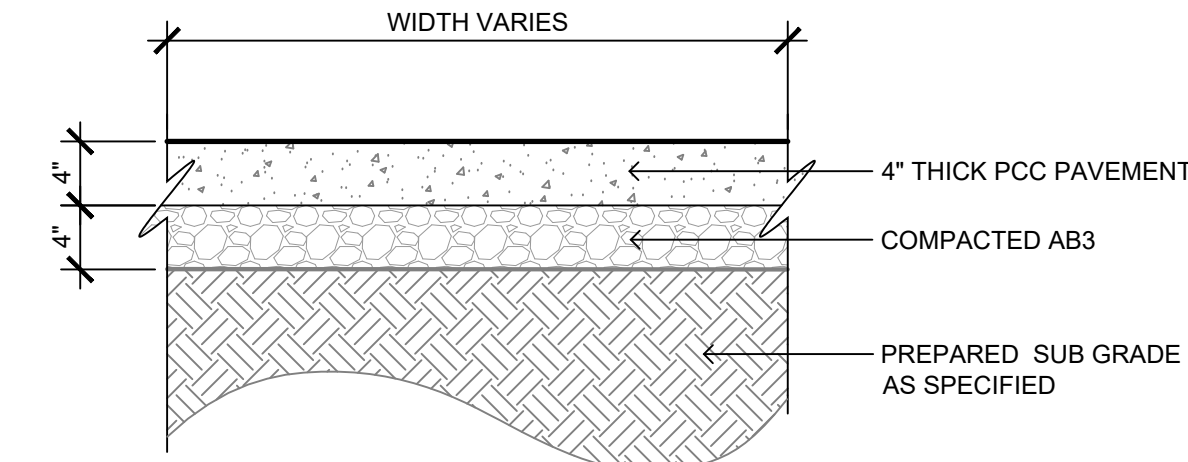
14 SP400 5" PCC CONCRETE COURT SCALE: 1" = 1'-0"



11 SP400 ELEVATION: GATE VINYL CHAINLINK SCALE: 1/2" = 1'-0"



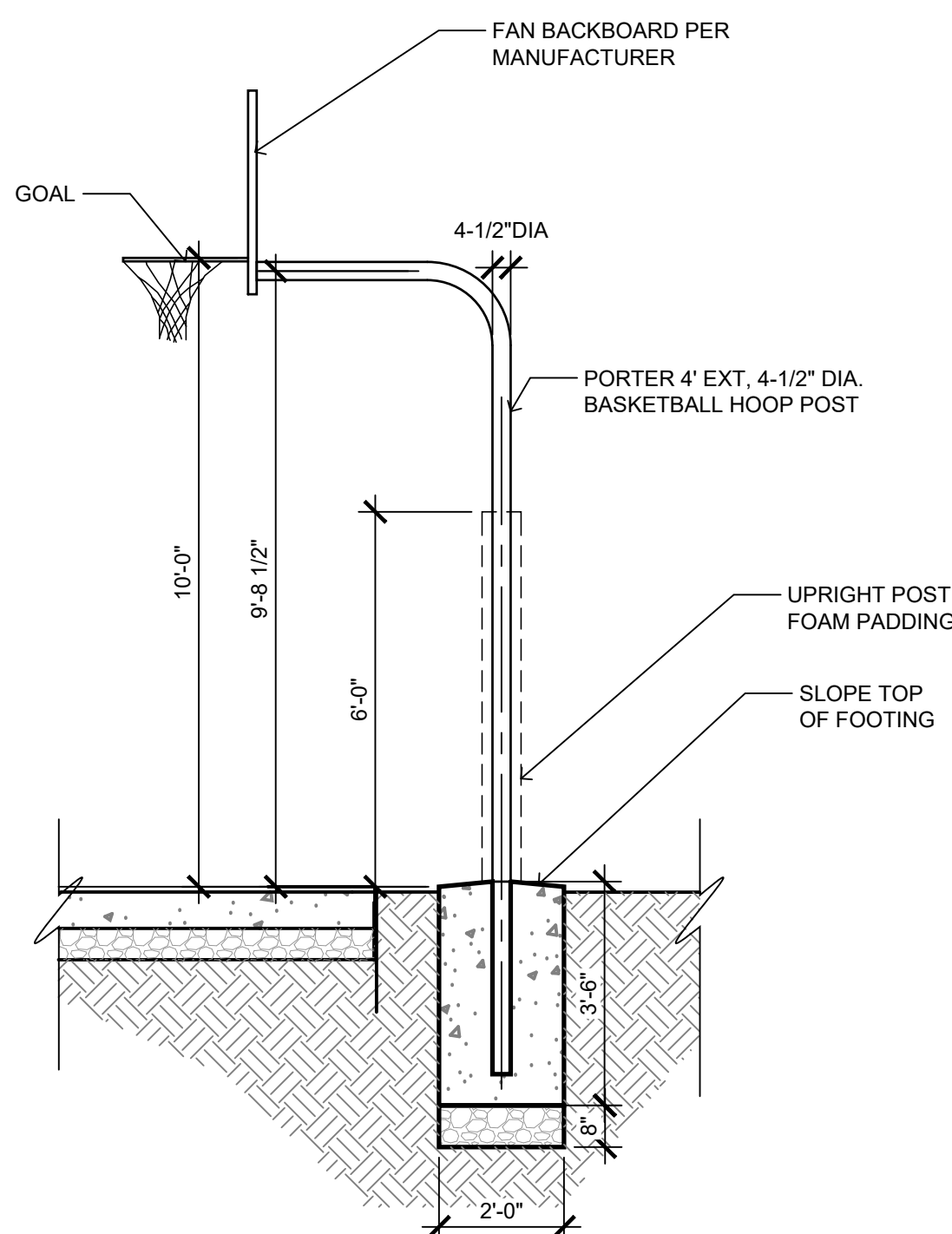
07 SP400 SECTION: SILT FENCE SCALE: 1/2" = 1'-0"



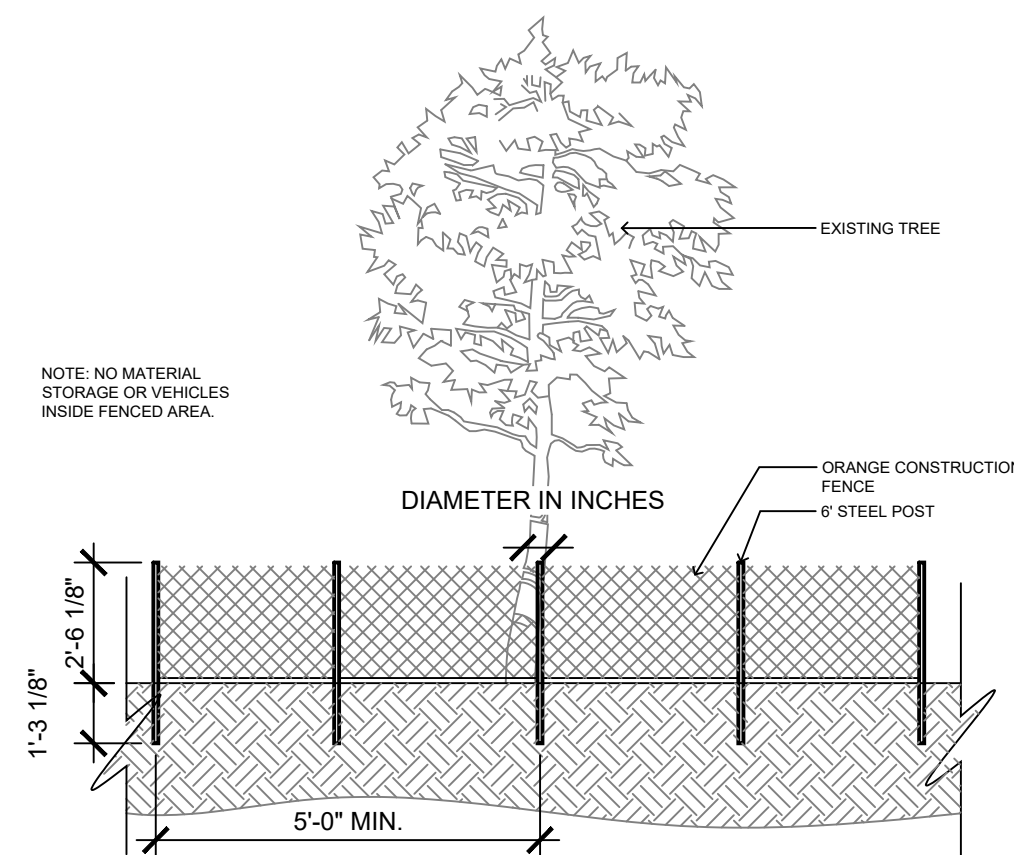
- NOTES:**
1. CROSS SLOPE NOT TO EXCEED 2.0%.
 2. CONTROL JOINTS TO OCCUR AT SPACING EQUAL TO WIDTH OF SLAB UNLESS INDICATED ON PLAN OR BY LANDSCAPE ARCHITECT.

03 SP400 4" PCC CONCRETE SCALE: 1" = 1'-0"

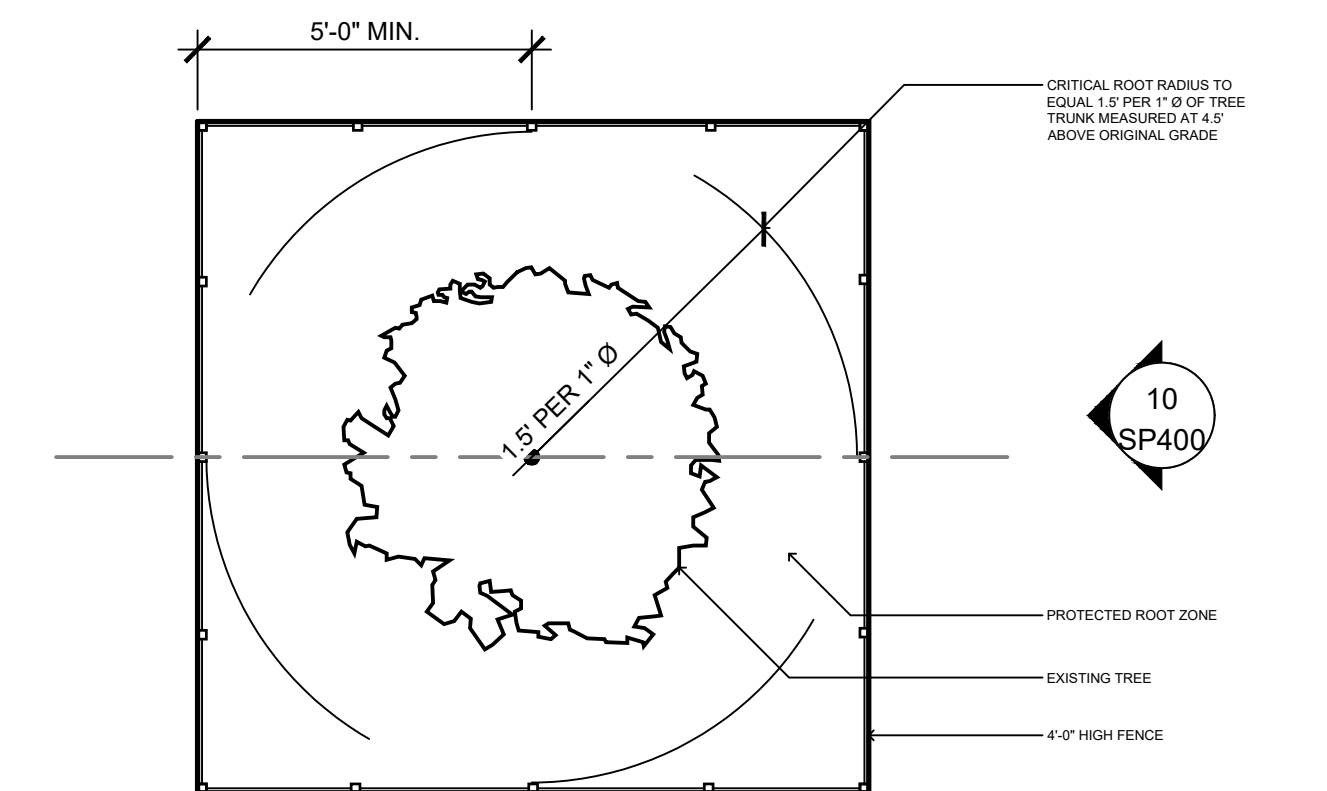
- NOTES:**
1. MODEL: PORTER 4' EXT. 4-1/2" DIA. BASKETBALL HOOP WITH POST MANUFACTURER: ANTHEM SPORTS (WWW.ANHEM-SPORTS.COM)
 2. MINIMUM RECOMMENDED FOOTING SIZE SHOWN PER MANUFACTURER'S INSTRUCTION AND RECOMMENDATION. CONTRACTOR TO VERIFY WITH GEO-TECH REPORT TO ENSURE THE SIZE OF FOOTING MEET THE REQUIREMENTS AND LOCAL BUILDING CODES REGARDING THE MINIMUM WIND SPEEDS.
 3. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR LANDSCAPE ARCHITECT'S REVIEW AND OWNER'S APPROVAL.



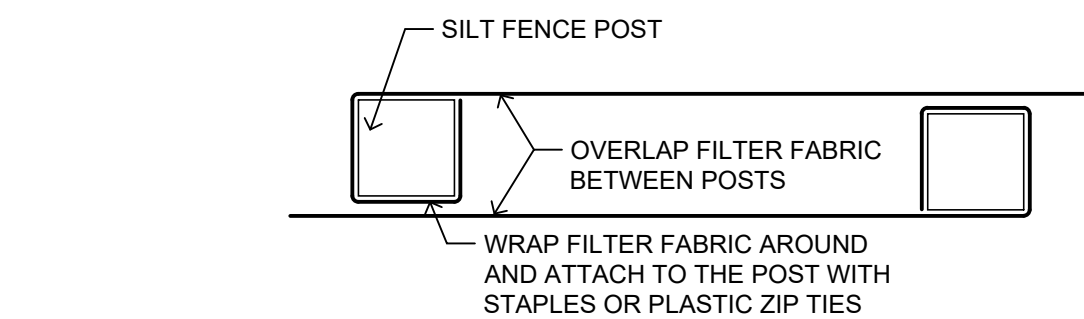
13 SP400 ELEVATION: BASKETBALL GOAL POST SCALE: 3/8" = 1'-0"



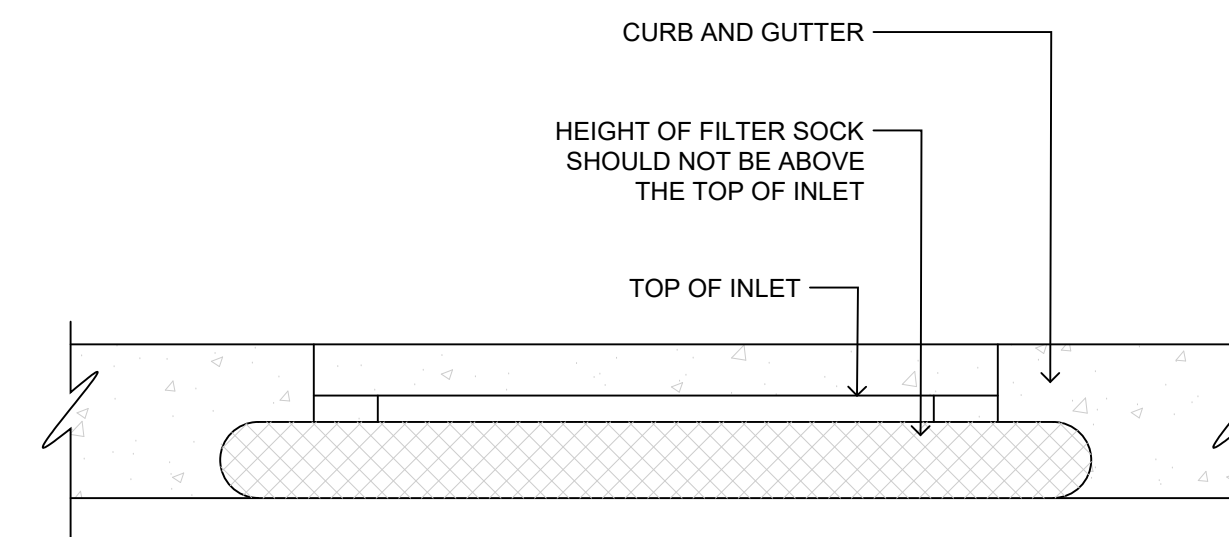
10 SP400 ELEVATION: TREE PROTECTION SCALE: 1/4" = 1'-0"



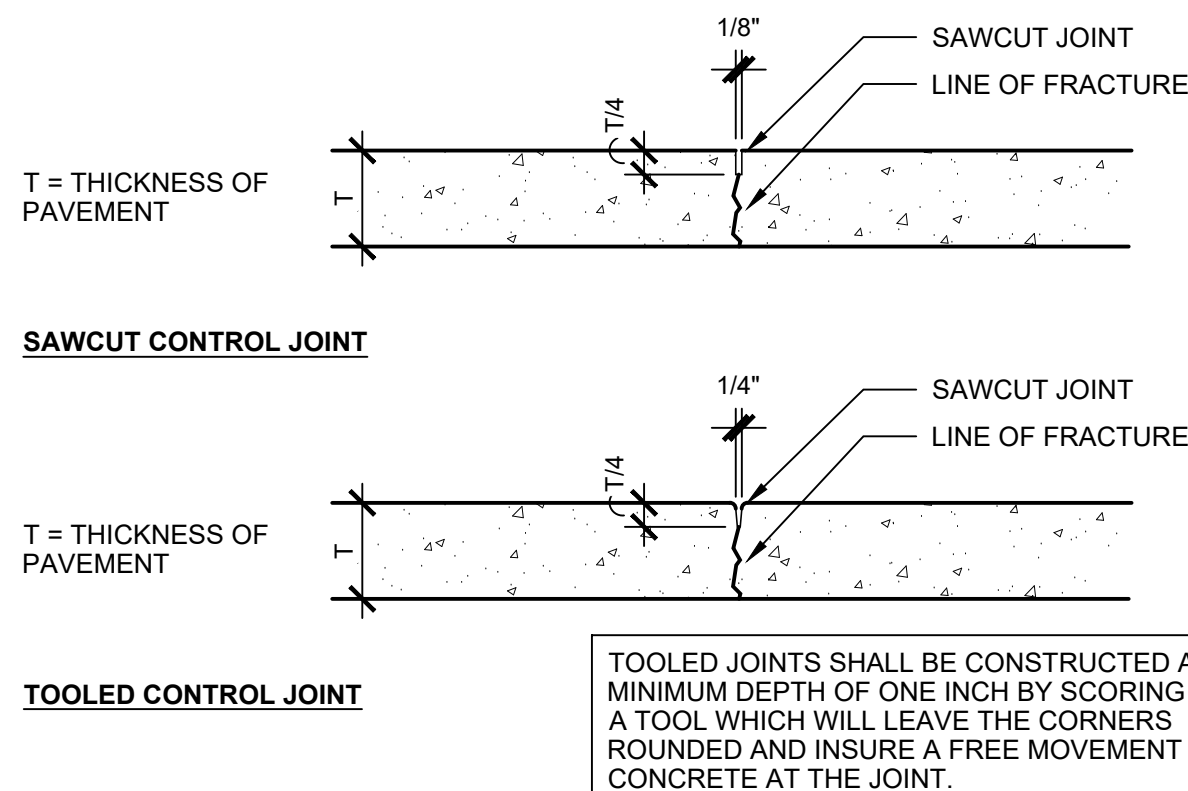
09 SP400 PLAN: TREE PROTECTION SCALE: 1/4" = 1'-0"



06 SP400 PLAN: JOINING SILT FENCE SECTIONS SCALE: 1 1/2" = 1'-0"

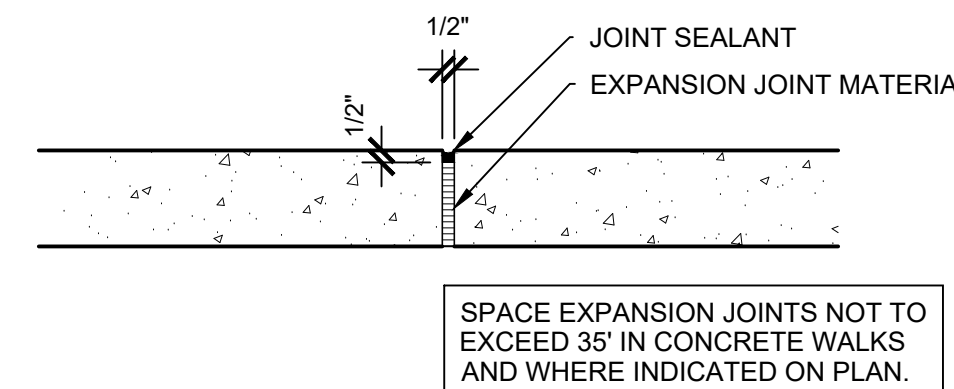


05 SP400 ELEVATION: SUMP INLET FILTER SCALE: 1" = 1'-0"

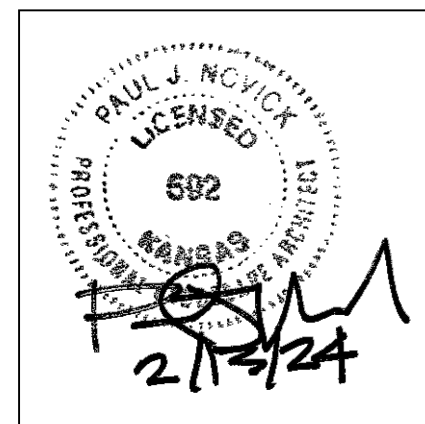


02 SP400 CONTROL JOINT SCALE: 1 1/2" = 1'-0"

ALL EXPANSION JOINTS IN WALKS SHALL BE SEALED WITH A SELF LEVELING URETHANE JOINT SEALANT.
 ASTM C920, MULTI-COMPONENT (M), GRADE P, CLASS 25, TRAFFIC (T) EXPOSURE. COLOR TO BE MANUFACTURERS STANDARD GRAY OR LIMESTONE.
 CLEAN, PRIME, AND BACK JOINTS AS RECOMMENDED BY SEALANT MANUFACTURER. INSTALL IN ACCORDANCE WITH ASTM C1193.
 CLEAN OFF EXCESS SEALANT AND SMEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND MATERIALS APPROVED IN WRITING BY THE SEALANT MANUFACTURER.



01 SP400 EXPANSION JOINT SCALE: 1 1/2" = 1'-0"



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DETAILS

SP400

THE LINE SHOWN ABOVE IS
EITHER AN ORIGINAL OR A
COPY OF THE ORIGINAL SHEET.

D

C
M
Y
K

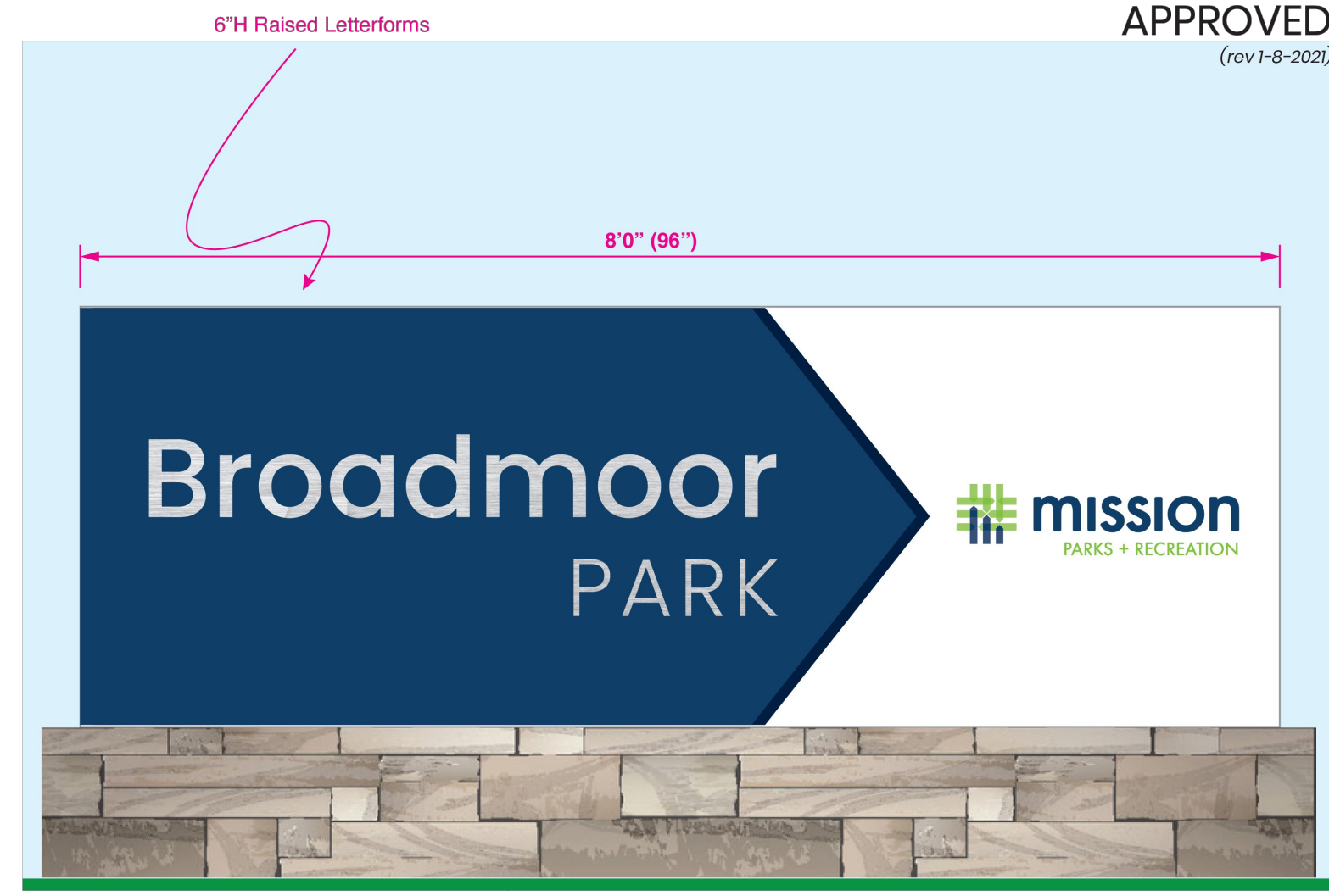
C

B

A

NOTES:

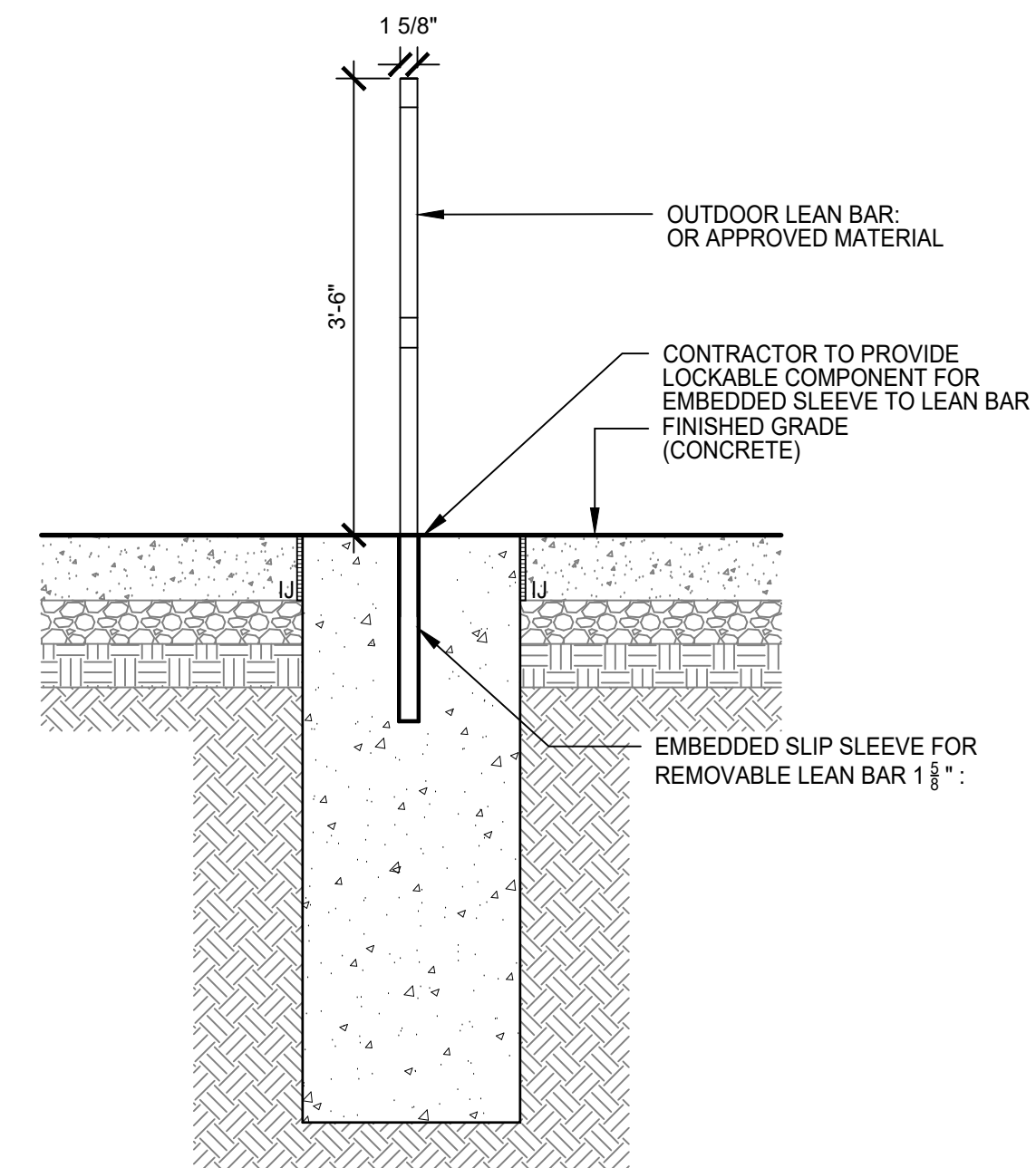
- A. CONTRACTOR TO SUBMIT FOR SIGNAGE PERMIT THROUGH THE COMMUNITY DEVELOPMENT DEPARTMENT



05 SP401 DETAIL: SIGNAGE N.T.S.

UNLINE RAIL
MFR: UNLINE OR APPROVED EQUAL
MODEL NO: (H-62976L)
SIZE: 1 5/8" DIAMETER STEEL PIPE WITH 21" HIGH WELDED MIDRAIL.
COLOR: POWDER COATED - CLASSIC BLACK
CONTACT: www.UNLINE.COOM

SHOP DRAWINGS REQUIRED



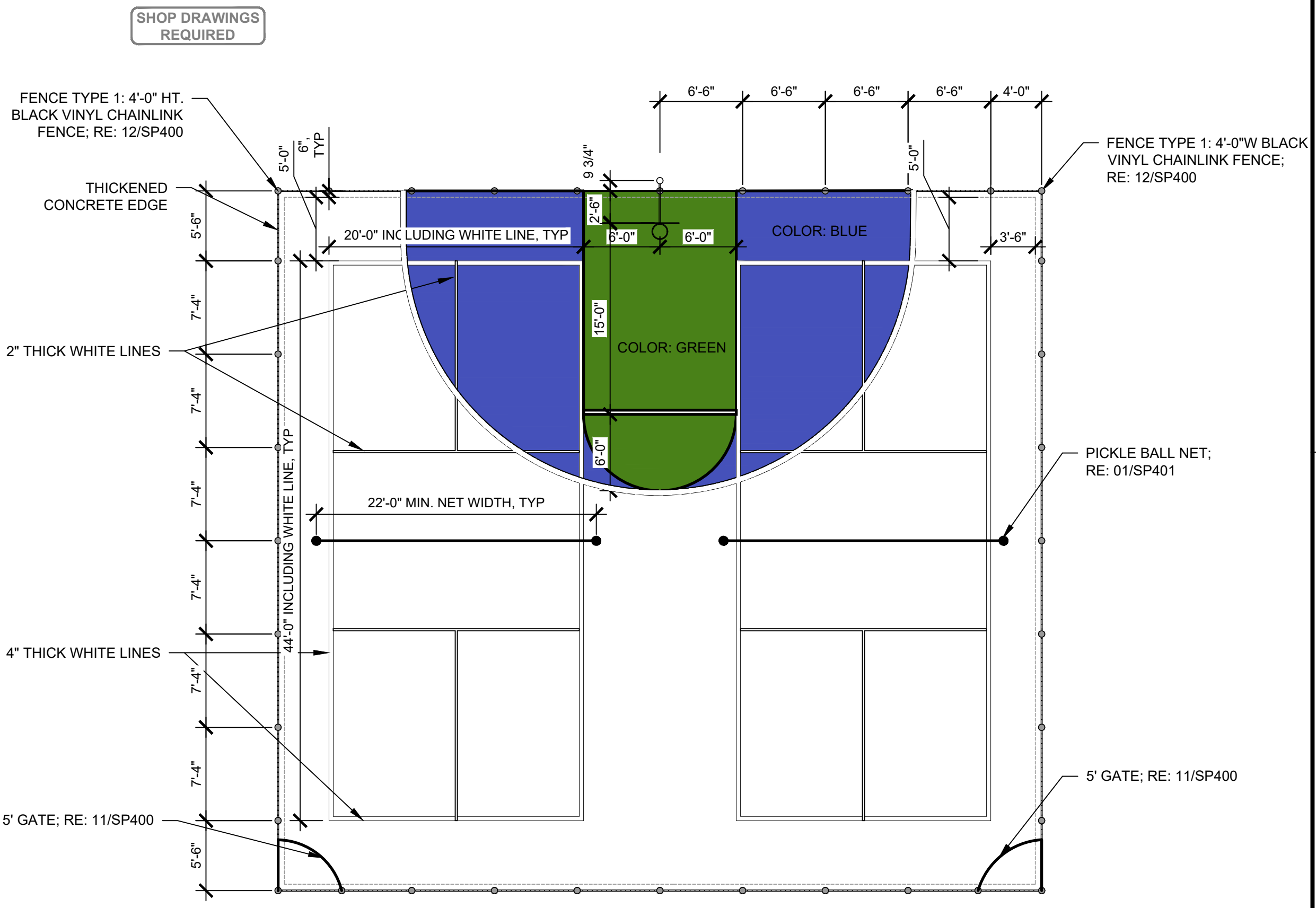
04 SP401 DETAIL: EMBEDDED SLEEVE WITH REMOVABLE LEAN BAR SCALE: 3/4" = 1'-0"

COURT NOTES:

- A. COATING NOTES:**
- a. THE CONCRETE SURFACE SHALL BE CLEAN PRIOR TO APPLYING COLOR COAT.
 - b. IT SHALL BE DRY AND FREE OF DUST, DIRT DURING THE APPLICATION OF THE PAVEMENT SURFACE SYSTEM.
 - c. TO CORRECT MINOR SURFACE IRREGULARITIES, APPLY A FILLER COAT. CHECK THE FILLER COAT COMPATIBILITY WITH THE COLOR SURFACE SUPPLIER.
 - d. APPLY AT LEAST ONE COAT OF ACRYLIC RESURFACER AND AT LEAST 2 COATS OF 'LIQUID APPLIED' CUSHIONING SYSTEM TO THE CONCRETE BASE.
 - e. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION SPECIFICATIONS
- B. PICKLEBALL COURT MARKING NOTES:**
- a. ALL WHITE LINE STRIPING SHALL BE 2" WIDE EXCEPT FOR BASE LINES WHICH SHALL BE 4" WIDE WHITE.
 - b. DIMENSIONS GIVEN ARE MEASURED TO THE OUTSIDE OF THE LINE EXCEPT FOR THE CENTER SERVICE LINE AND THE CENTER MARK, BOTH OF WHICH SHALL BE ON THE CENTERLINE OF THE COURT.
 - c. PLAYING LINES SHALL NOT VARY MORE THAN 1/4" FROM THE EXACT MEASUREMENTS.
- C. PROJECT COMPLETION:**
- a. UPON COMPLETION OF WORK THE CONTRACTOR SHALL CAREFULLY CLEAN-UP AND REMOVE ALL LEFT OVER MATERIALS SO AS TO RETURN THE WORK SITE TO THE CONDITION IT WAS PRIOR TO CONSTRUCTION ACTIVITIES.

NOTES - BASKETBALL COURT COLORS

- A. 3 POINT LINE AREA: BLUE
- B. INNER AREA: GREEN
- C. OTHER LINES: WHITE
- D. CONTRACTOR TO PROVIDE TWO 6"X6" SAMPLES OF THE IN-BOUND COURT COLOR. LANDSCAPE ARCHITECT AND OWNER TO CHOOSE FROM THE BLUE AND THE GREEN COLOR SECTION SAMPLES.

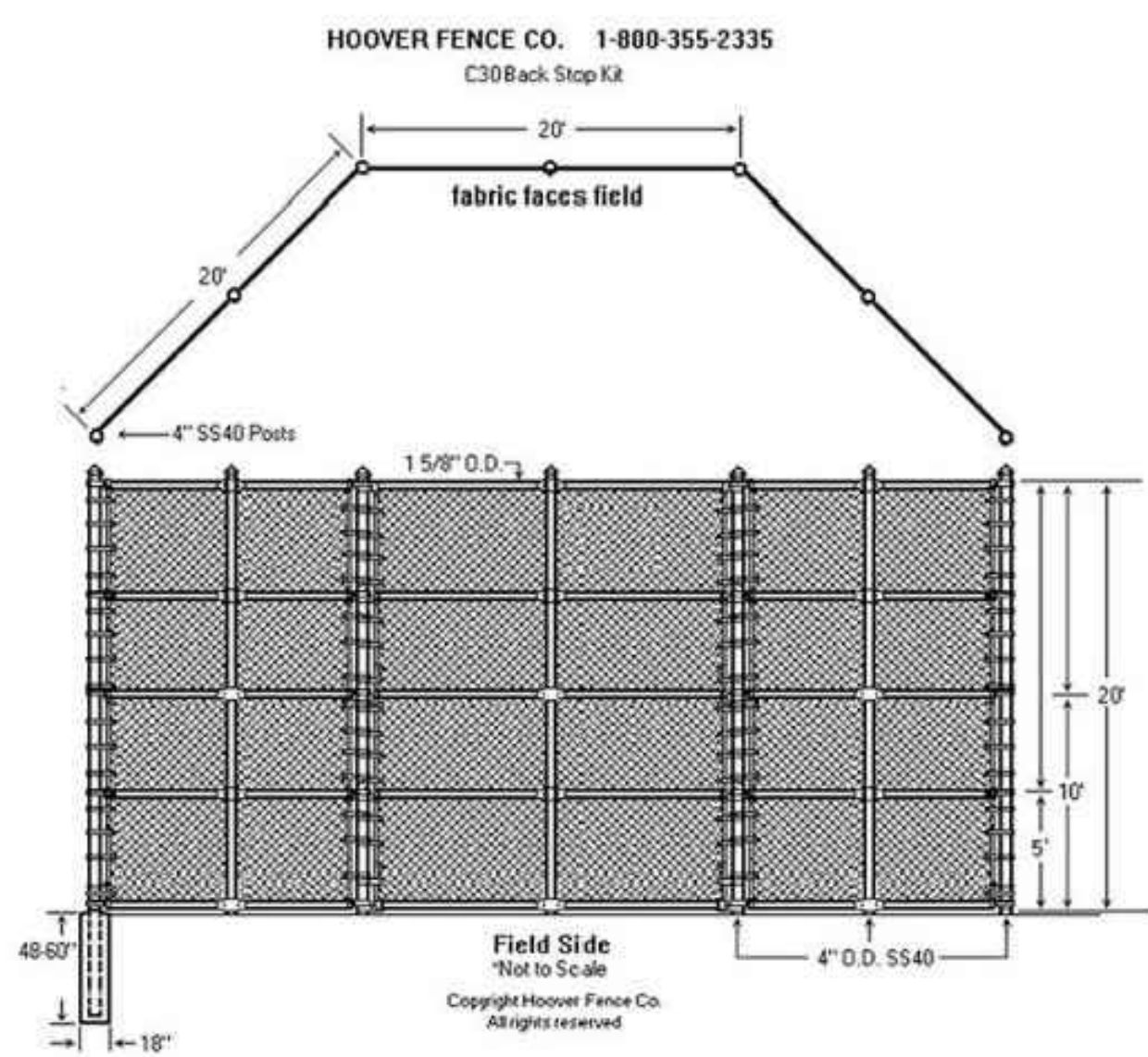


SHOP DRAWINGS REQUIRED

02 SP401 PLAN: COURT MARKINGS SCALE 1/8"=1'-0"

BACKSTOP KIT, 20' WIDE, 20' WINGS, 20' HIGH

MFR: HOOVER FENCE CO. OR AS APPROVED EQUAL
MODEL NO: (Model #BS-C30)
SPEC: 9 GAUGE GALVANIZED CHAIN LINK
CONTACT: www.hooverfence.com



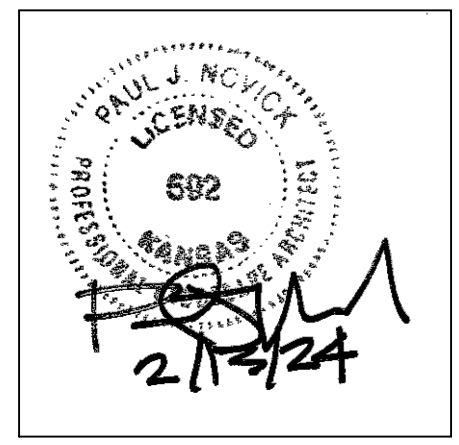
03 SP401 DETAIL: BACKSTOP N.T.S.

PICKLE BALL NET

MFR: ONCOURT OFFCOURT PICKLENET DELUXE OR AS APPROVED EQUAL
MODEL NO: (Model #OO250)
COLOR: WHITE
CONTACT: www.pickleballcentral.com



01 SP401 SECTION: MOVEABLE PICKLEBALL NET N.T.S.



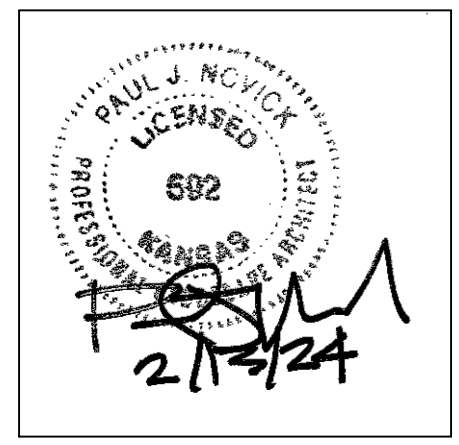
Revision Schedule

No.	Date	Description
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MOHAWK PARK PHASE 2
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6090 WOODSON ST. MISSION, KS 66202

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SITE DETAIL
SP401



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STANDARD DETAIL

SP402

THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL OR A
 COPY OF THE ORIGINAL

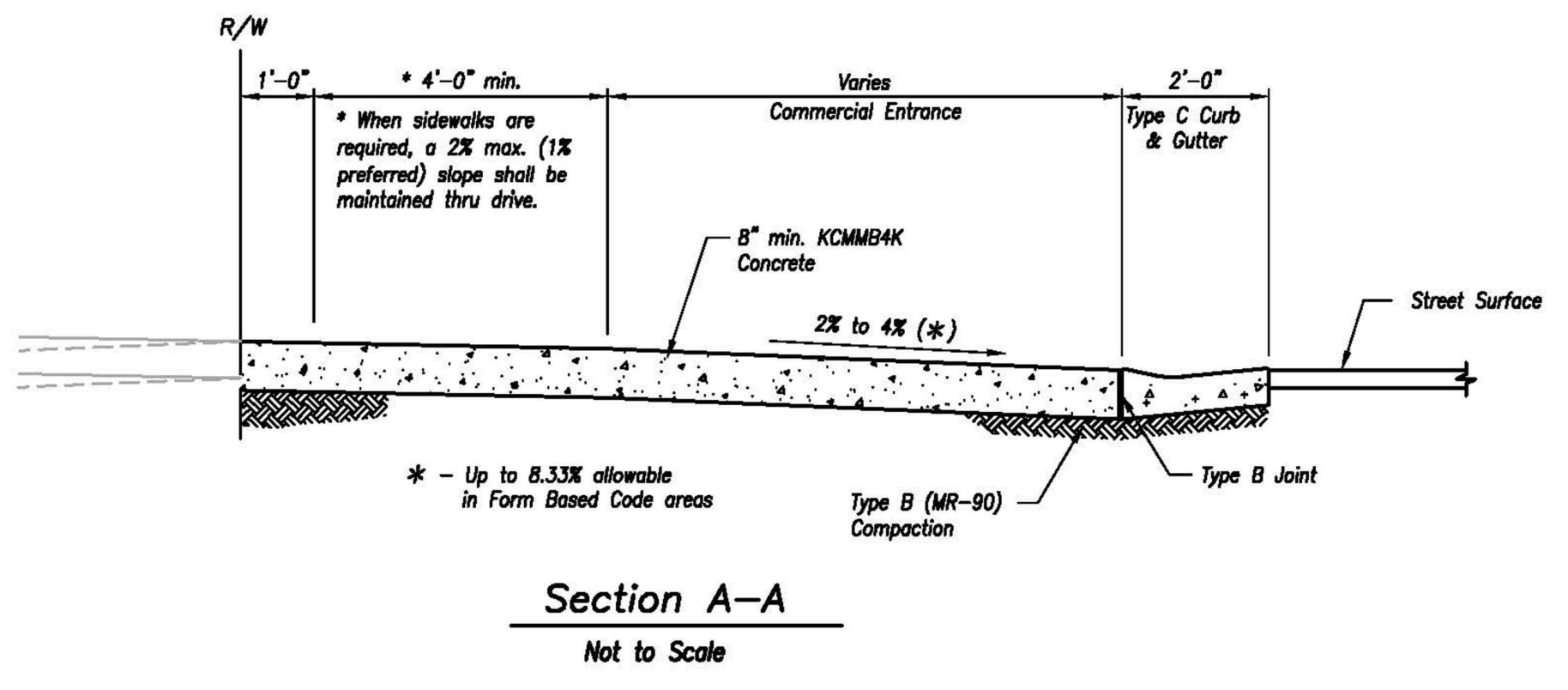
D

C
 THE SQUARES ABOVE ARE COLOR
 MATCHES TO THE ORIGINAL
 DRAWING. IF PRINTED SEPARATELY,
 THEY WILL NOT PRINT CORRECTLY.

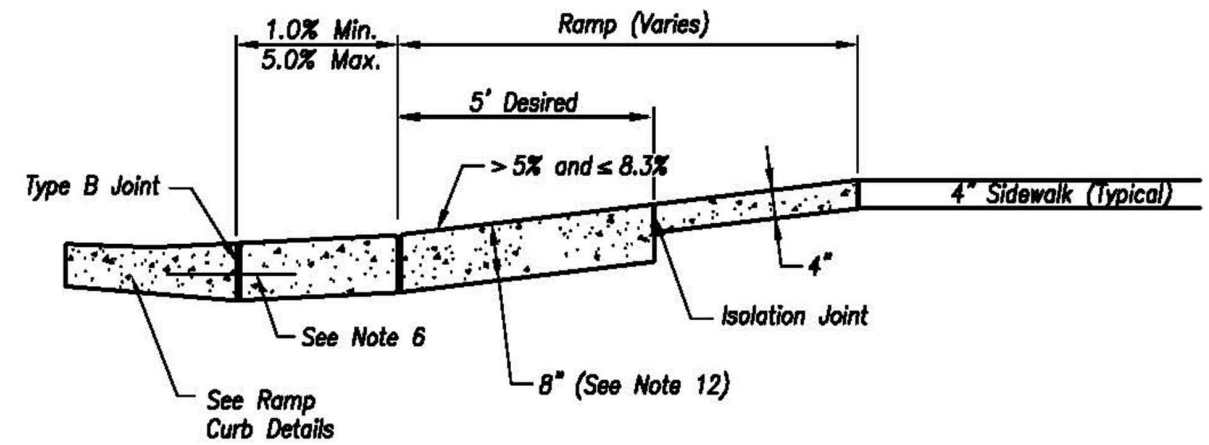
C

B

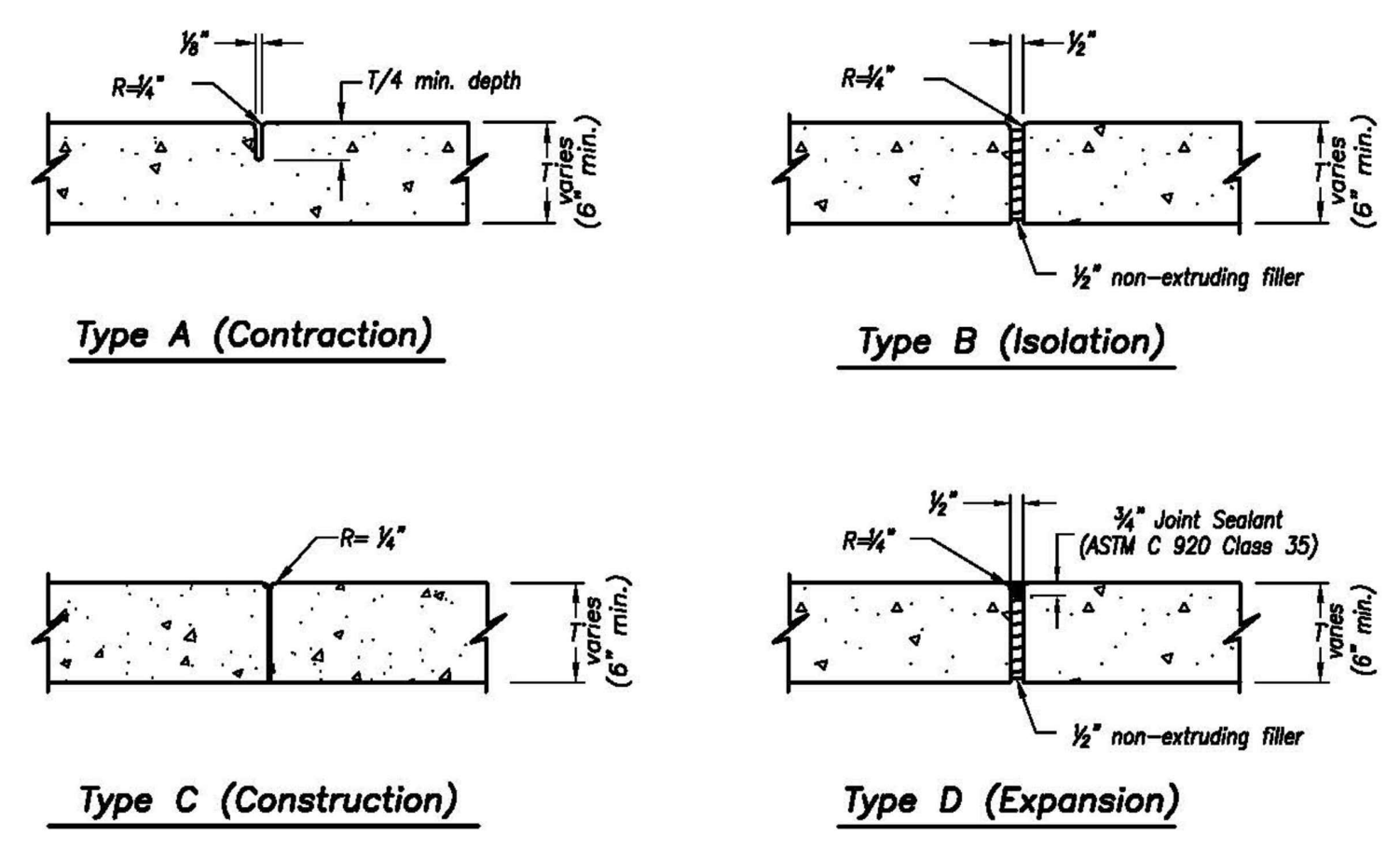
A



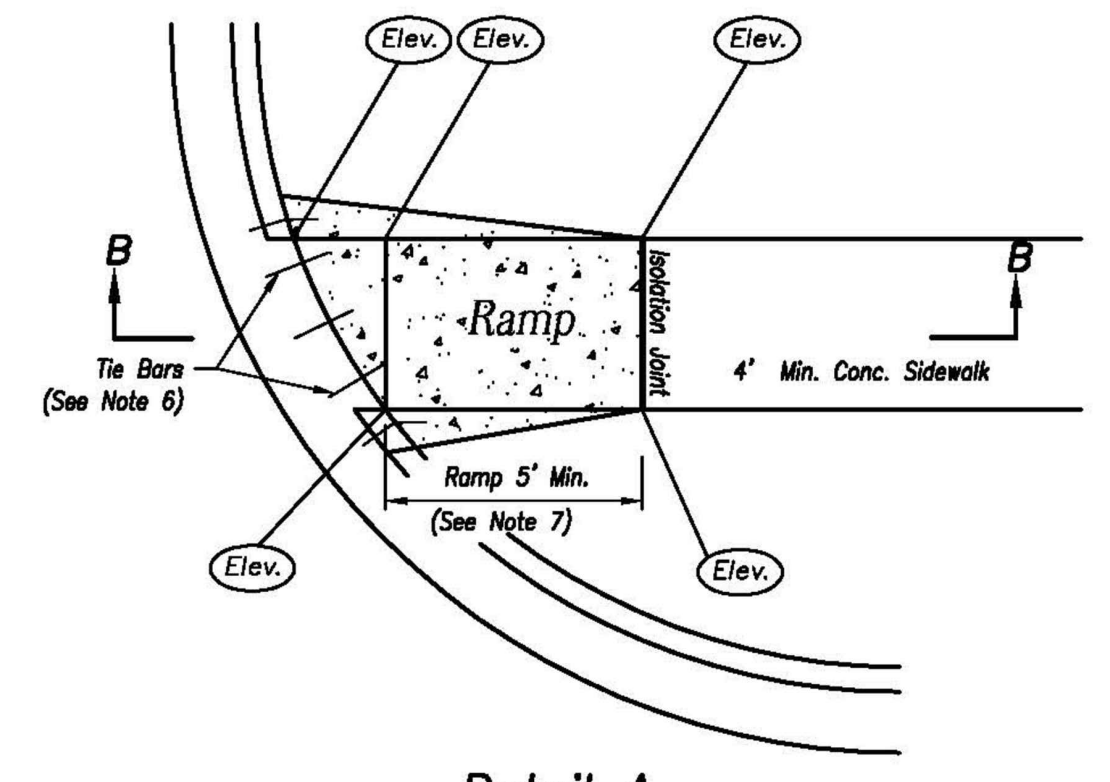
Section A-A
 Not to Scale



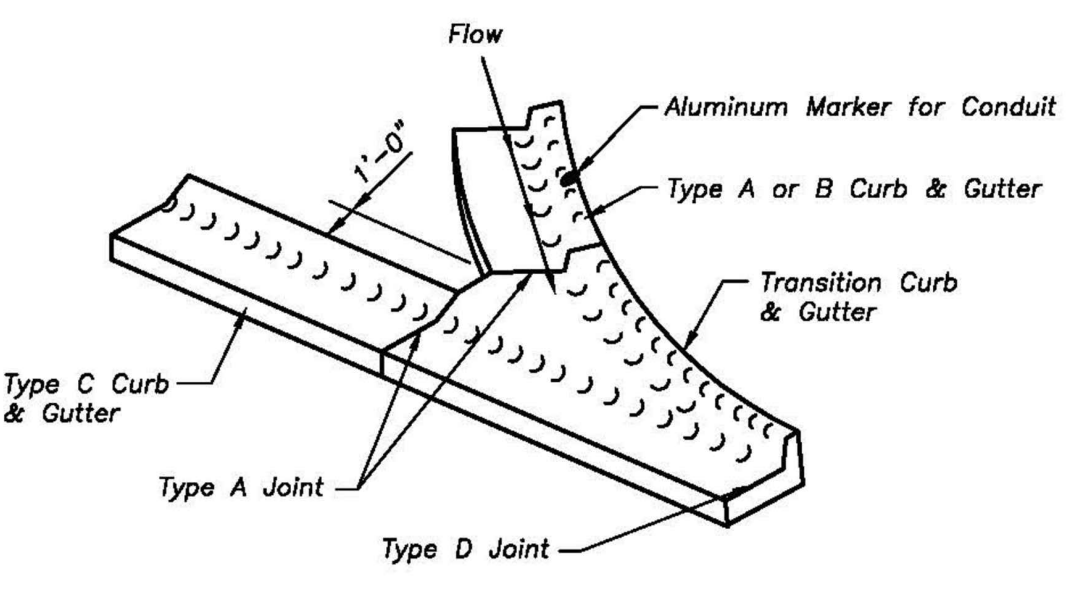
Section B-B (*)
 * - See Note 4 for application of Detectable Warning Surface
 Not to Scale



JOINT DETAILS
 Not to Scale



Detail A
 Not to Scale



Detail B
 Not to Scale

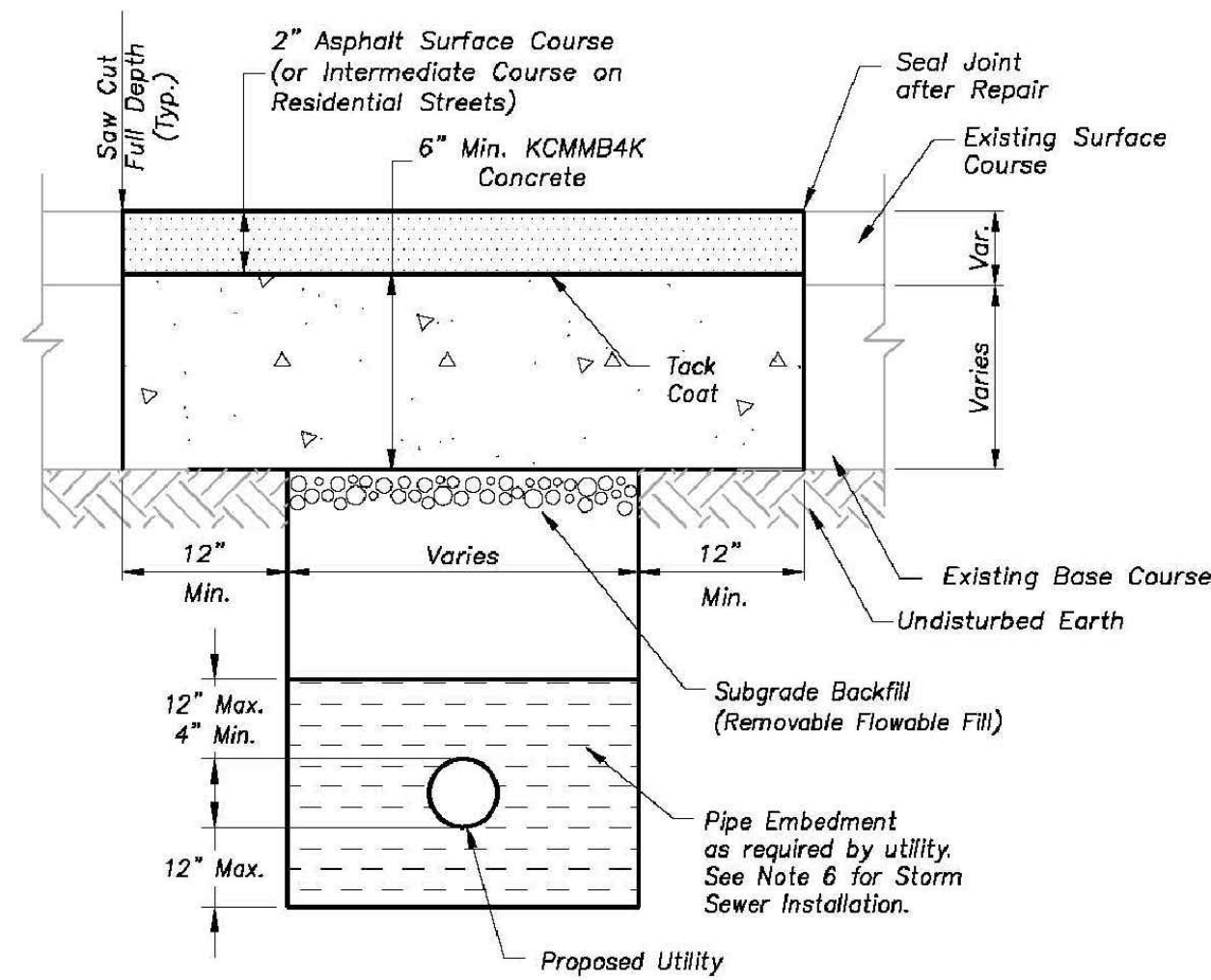
COMMERCIAL ENTRANCE DETAIL

Commercial Drive Notes:

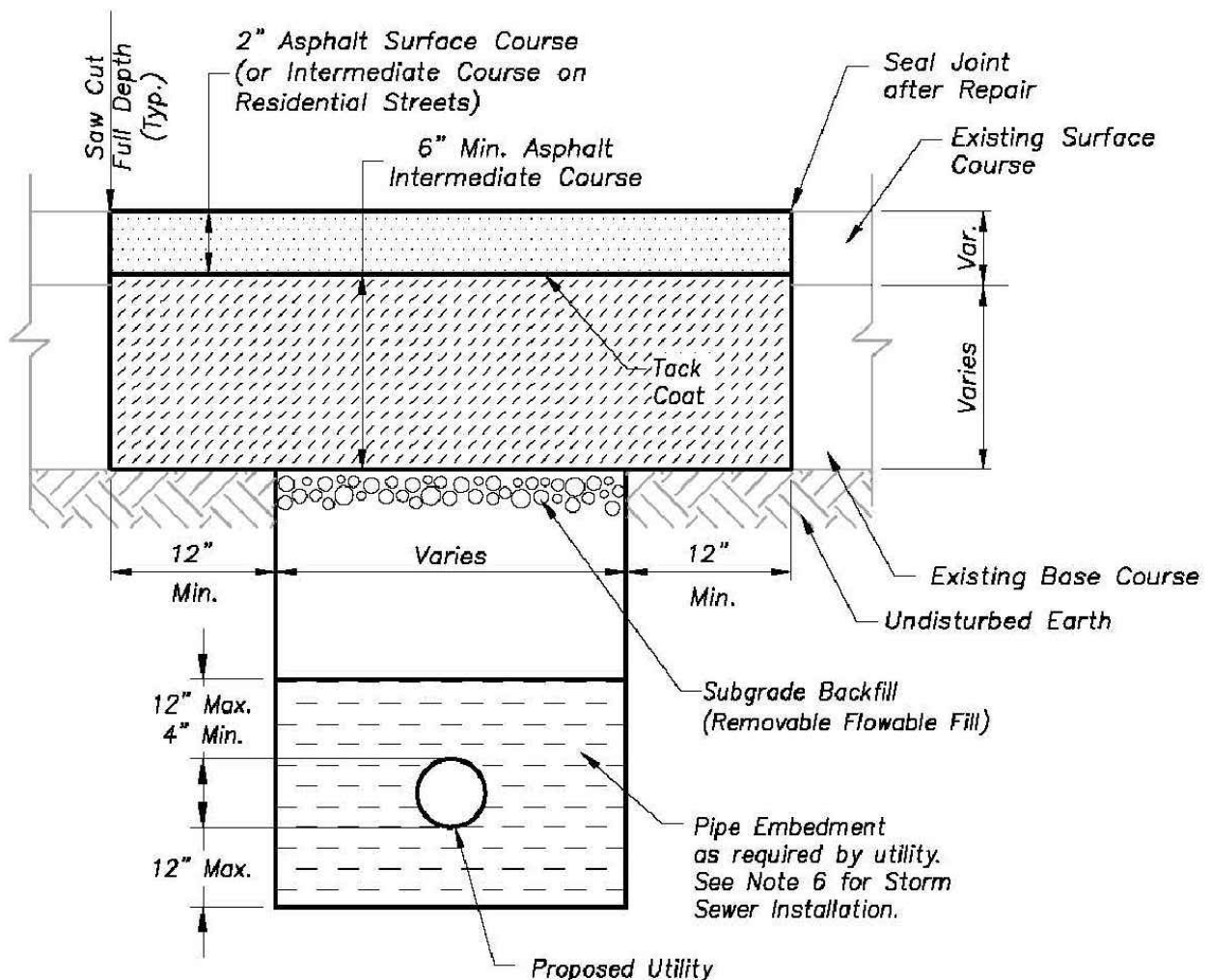
- Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted.
- KCMBAK Concrete shall be used throughout.
- Concrete pavement shall be jointed with Type A joints. No jointed slab shall exceed 12' x 12'.
- Detectable warning surfaces are not required at non-signalized entrances.
- ADA compliance will be measured at points labeled (Elev.).
- Install 18" tie bars #4 epoxy coated @ 18" o.c. and through wings as shown.
- Sidewalk Ramp shall be lengthened to provide ADA compliant slope, but need not exceed 15'.
- ADA maximum ramp slope = 1"/ft.
 ADA maximum cross slope = 2%.
- Top of curb elevations shall be shown at quarter points and curb returns.
- Any additional steel reinforcement shall be approved by the City Engineer.
- See Curb Replacement Detail for additional requirements.
- Only 8" thick panels will be paid for as "RAMP". Sidewalk behind isolation joint will be paid for as "4" SIDEWALK".

THE LINE SHOWN ABOVE IS WITHIN THE ORIGINAL SCALE SIZE SHEETS ORIGINAL SCALE SIZE

D

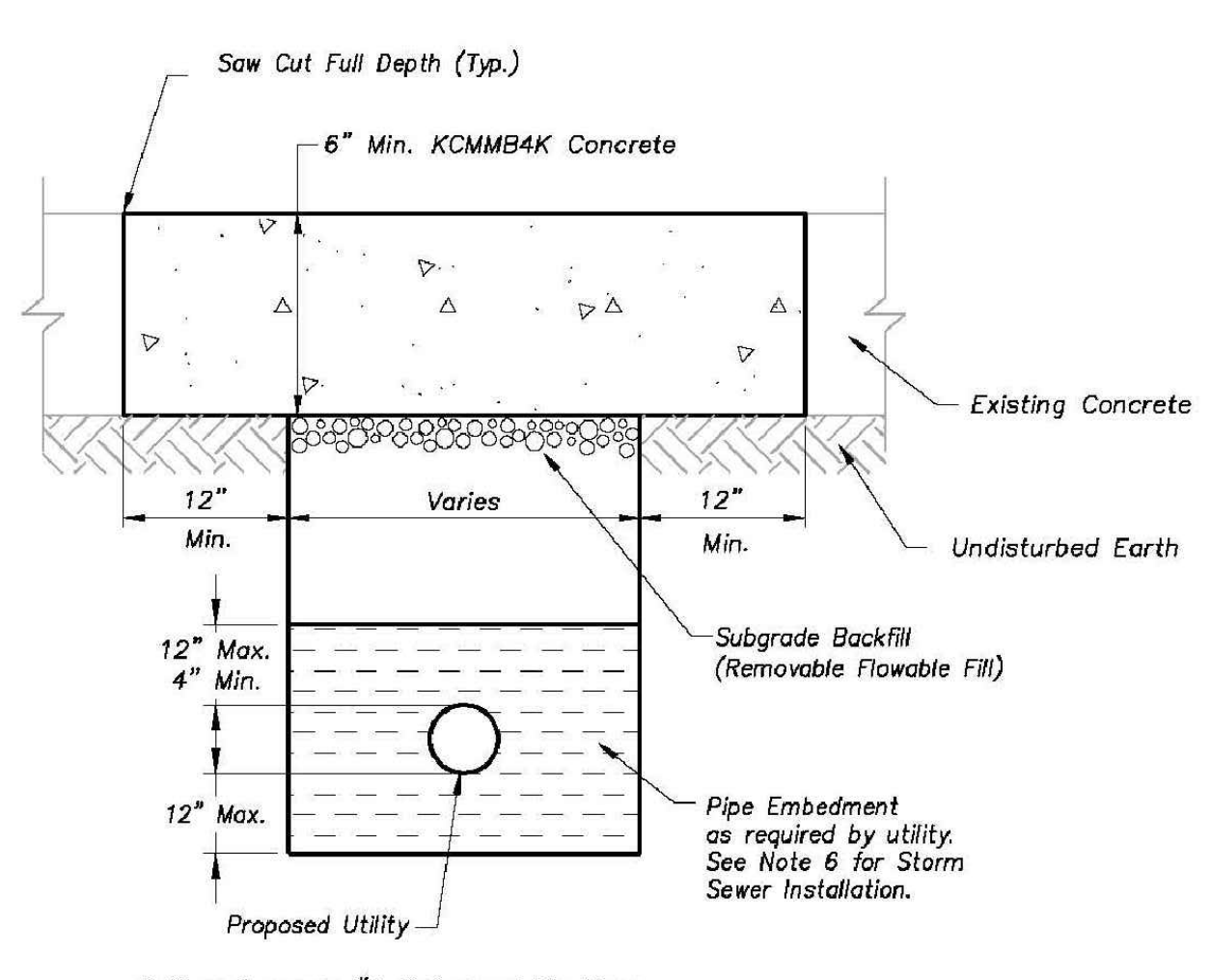


Asphaltic Concrete Street Repair Type I
 (Concrete Base /w Asphaltic Concrete Surface)

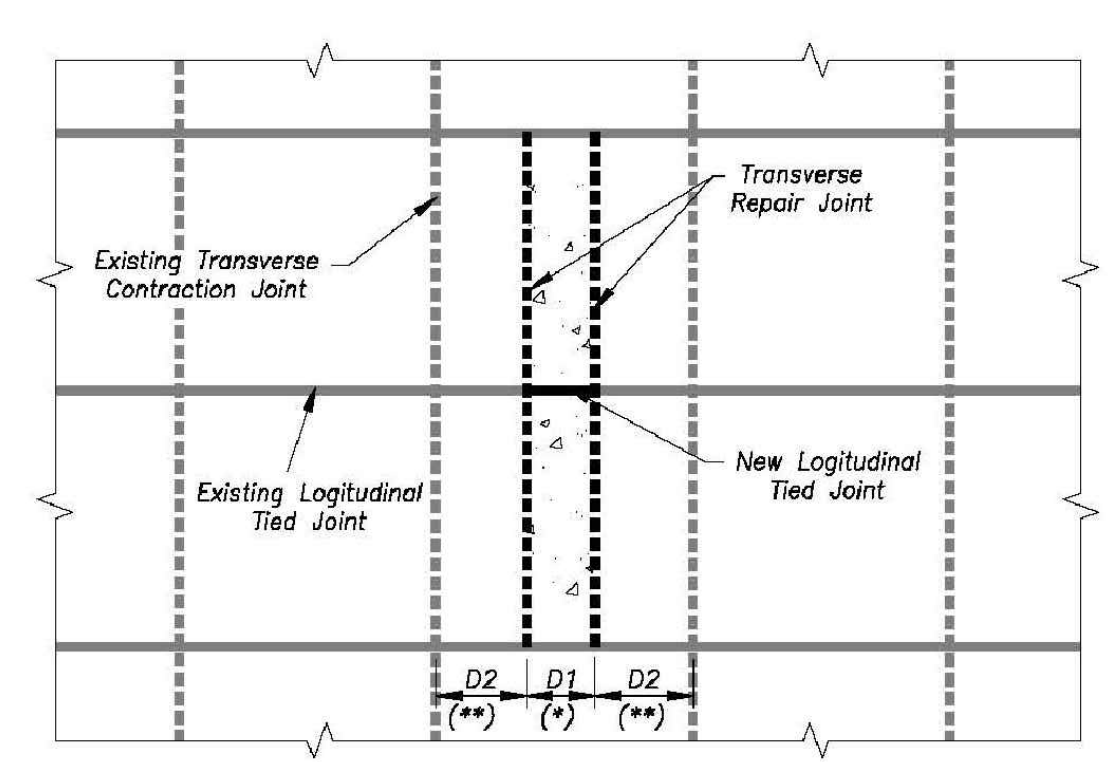


Asphaltic Concrete Street Repair Type II *
 (Full Depth Asphaltic Concrete)

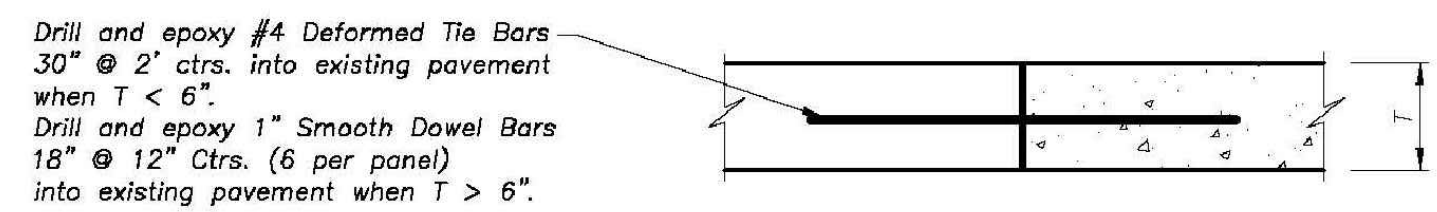
* - Type II Street Repair May be Used Only if Excavation Width Exceeds 6'



Portland Cement Concrete Street Repair **
 ** - May be Used Only on Existing Concrete Streets

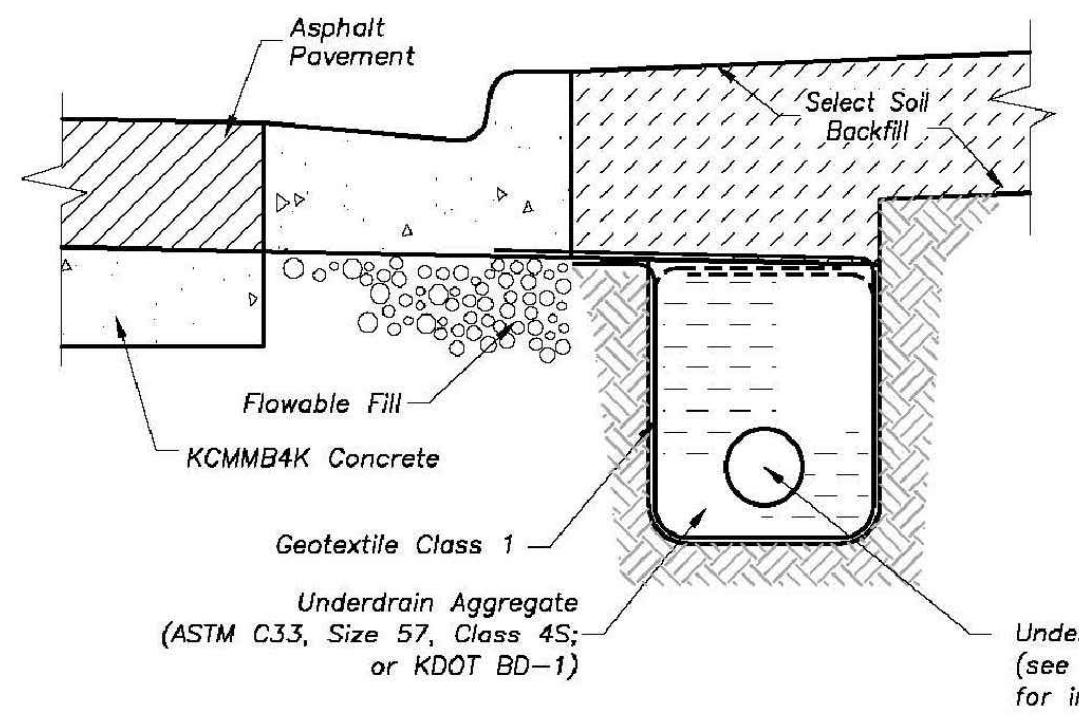


(*) - When street repair (D1) is greater than 50% of the slab, replace the entire slab.
 (***) - When the distance between the repair joint and the existing joint (D2) is less than 3', replace panel to the existing joint. (See Transverse Repair Joint Detail). When D2 is more than 3' - see Transverse Repair Joint Detail.

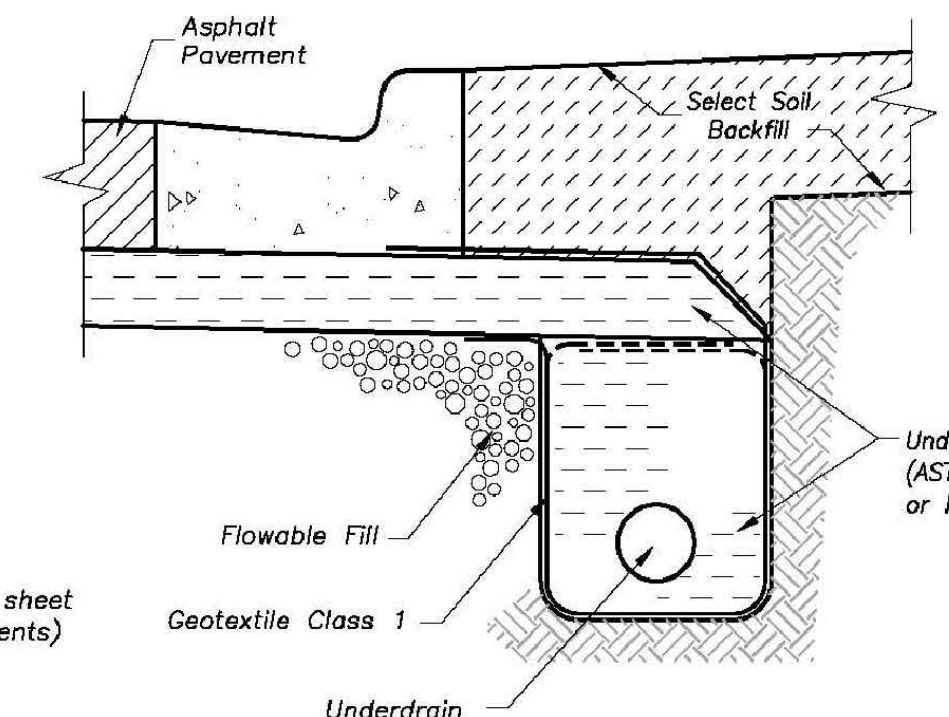


Transverse Repair Joint
 (See Sht.13 for additional Joint Details)

C

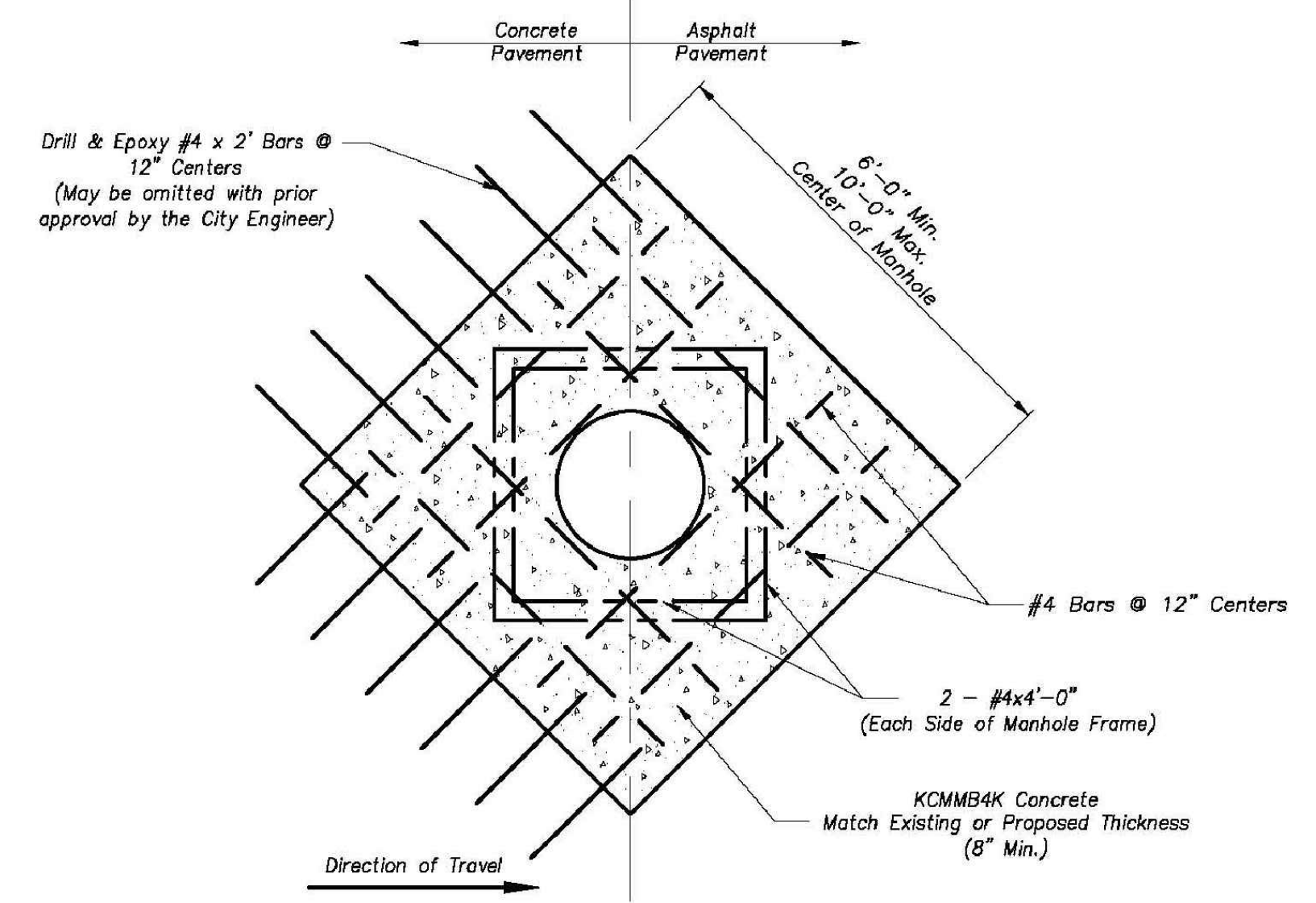


Pipe Underdrain Repair



Pipe Underdrain Repair with OP Special

B



Manhole in Paved Area ****

**** - Detail applies to improved thoroughfares and all improved concrete streets. For existing concrete streets, coordinate with existing joints.

Street Repair Notes:

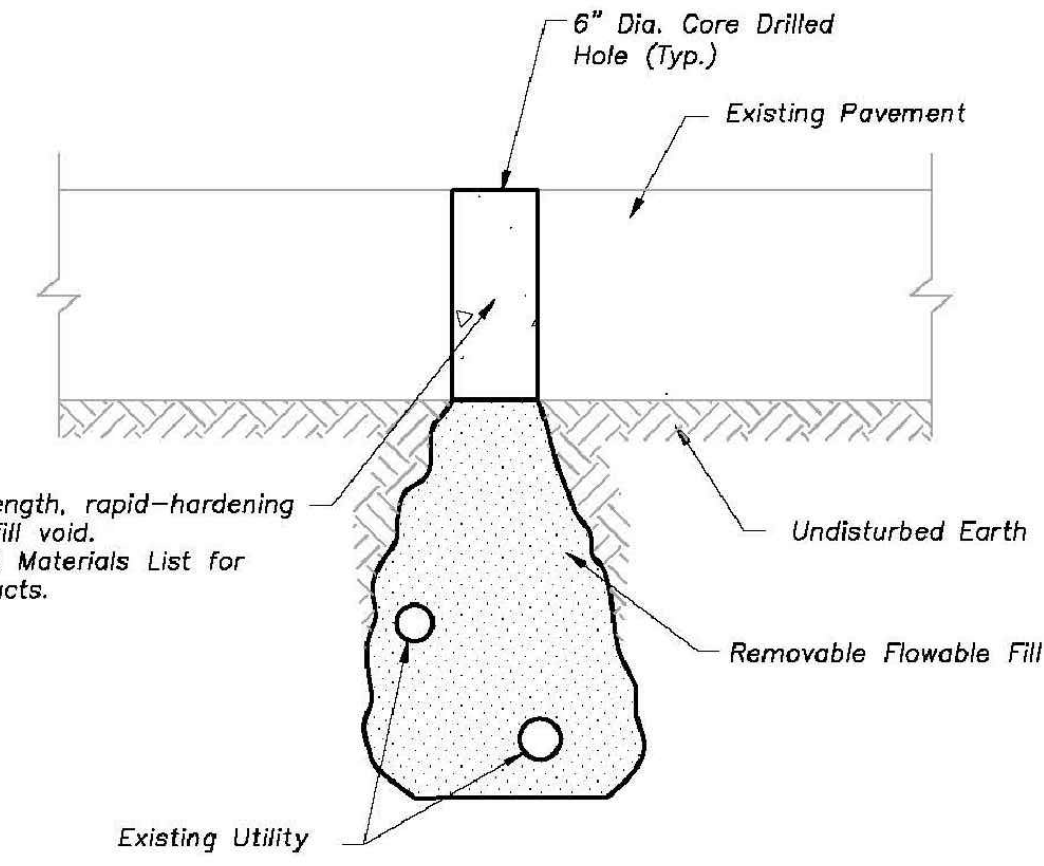
- Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted. In restoring the Right-of-Way, the Permittee guarantees its work and shall maintain it for 24 months following its completion.
- The Manual on Uniform Traffic Control Devices, the Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations, and the latest edition of the O.P. Manual of Infrastructure Standards are incorporated except as otherwise noted.
- Any excavation left open overnight in any roadway shall be securely plated. Plates shall be properly anchored and all edges of the plate shall be ramped with asphalt surface mix to prevent rotting.
- All KCMMB4K Concrete, removable flowable fill and asphaltic concrete shall conform to OPMC Title 13.
- When trenching through OP Special Aggregate Base, flowable fill shall be used to backfill the trench to the elevation of the bottom of the OP Special Aggregate Base, then backfilled and compacted to the bottom of pavement with ASTM C33, Size 57, Class 4S aggregate.
- For Storm Sewer Installation pipe embedment shall be filled to 4" above the top of pipe.
- Permanent pavement markings shall be replaced with like materials within fourteen days after the pavement surface has been replaced, unless otherwise authorized by the City Engineer.

A

Repair Under Curb, Sidewalk or Driveway

Repair under curb/sidewalk/driveway notes:

- Curbs, sidewalks and driveways shall be sawed full depth, removed and replaced to nearest contraction or expansion joint.
- If adjacent section of curb, sidewalk or driveway is cracked, chipped or otherwise damaged, it shall also be removed and replaced to nearest joint.
- All concrete used in this work shall be KCMMB4K.



Utility Investigation Excavation Repair ***

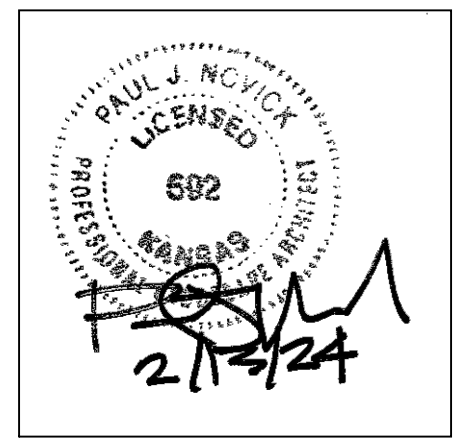
*** - for repair areas under 1 s.f.

Utility Investigation Excavation Repair Notes:

- For repair areas greater than 1 s.f. or non-core drilled pavement cut see Street Repair Detail.
- Contact the City Representative regarding approved bonding agent.
- High Strength, rapid hardening concrete may be substituted with non-shrink grout, having a minimum compressive strength of 3000 psi in 24 hours and conforming to ASTM C1107, with a 2" cap of asphalt repair material.

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STANDARD DETAIL

SP403

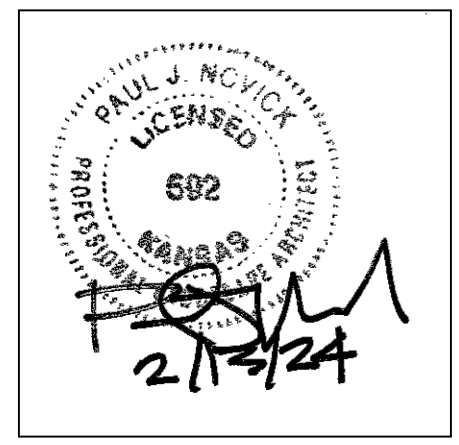
PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING/REMARKS
CANOPY TREES						
AS	6	Acer saccharum 'JFS-Caddo2'	FLASHFIRE SUGAR MAPLE	3" CAL	B&B	SPECIMEN QUALITY
GT	9	Gleditsia triacanthos f. inermis 'Skyline'	SKYLINE HONEYLOCUST	3" CAL	B&B	SPECIMEN QUALITY
PT	8	Populus tremuloides 'NE Arb'	PRAIRIE GOLD ASPEN	3" CAL	B&B	SPECIMEN QUALITY
QR	10	Quercus rubra	NORTHERN RED OAK	3" CAL	B&B	SPECIMEN QUALITY
UA	6	Ulmus americana 'Pioneer'	PIONEER ELM	3" CAL	B&B	SPECIMEN QUALITY
ORNAMENTAL TREES						
AT	5	Asimina triloba	PAWPAW	2" CAL	B&B	SPECIMEN QUALITY
CC	3	Cercis canadensis 'JN2 The Rising Sun'	THE RISING SUN EASTERN REDBUD	2" CAL	B&B	SPECIMEN QUALITY
MV	5	Magnolia virginiana	SWEETBAY MAGNOLIA	2" CAL	B&B	SPECIMEN QUALITY
SR	5	Syringa reticulata 'Ivory Silk'	JAPANESE TREE LILAC	2" CAL	B&B	SPECIMEN QUALITY
CONIFER TREES						
JC	10	Juniperus chinensis 'Torulosa'	TORULOSA JUNIPER	6' HT.	B&B	
PS	11	Pinus Strobus 'Fastigiata'	EASTERN WHITE PINE	6' HT.	B&B	
TO	13	Thuja occidentalis 'Green Giant'	GREEN GIANT ARBORVITAE	6' HT.	B&B	

MEADOW MIX						
BC		Bouteloua curtipendula	SIDE OATS GRAMA	#1	CONT.	3'-0" O.C.
EC		Echinacea pallida	PALE PURPLE CONEFLOWER	#1	CONT.	3'-0" O.C.
PC		Phemeranthus caticynus	FAME FLOWER	#1	CONT.	3'-0" O.C.
SH		Sporobolus heterolepis	PRAIRIE DROPSEED	#1	CONT.	3'-0" O.C.
SL		Symphotrichum laeve	SMOOTH ASTER	#1	CONT.	3'-0" O.C.
SS		Schizachyrium scoparium 'Blue Heaven'	BLUE HEAVEN LITTLE BLUESTEM	#1	CONT.	3'-0" O.C.
TD		Tripsacum dactyloides	EASTERN GRAMA GRASS	#1	CONT.	3'-0" O.C.
TOTAL	33645 SF					
GRASS						
CD	APPROX 76,000 SF	Cynodon dactylon	TALL FESCUE	SEED		

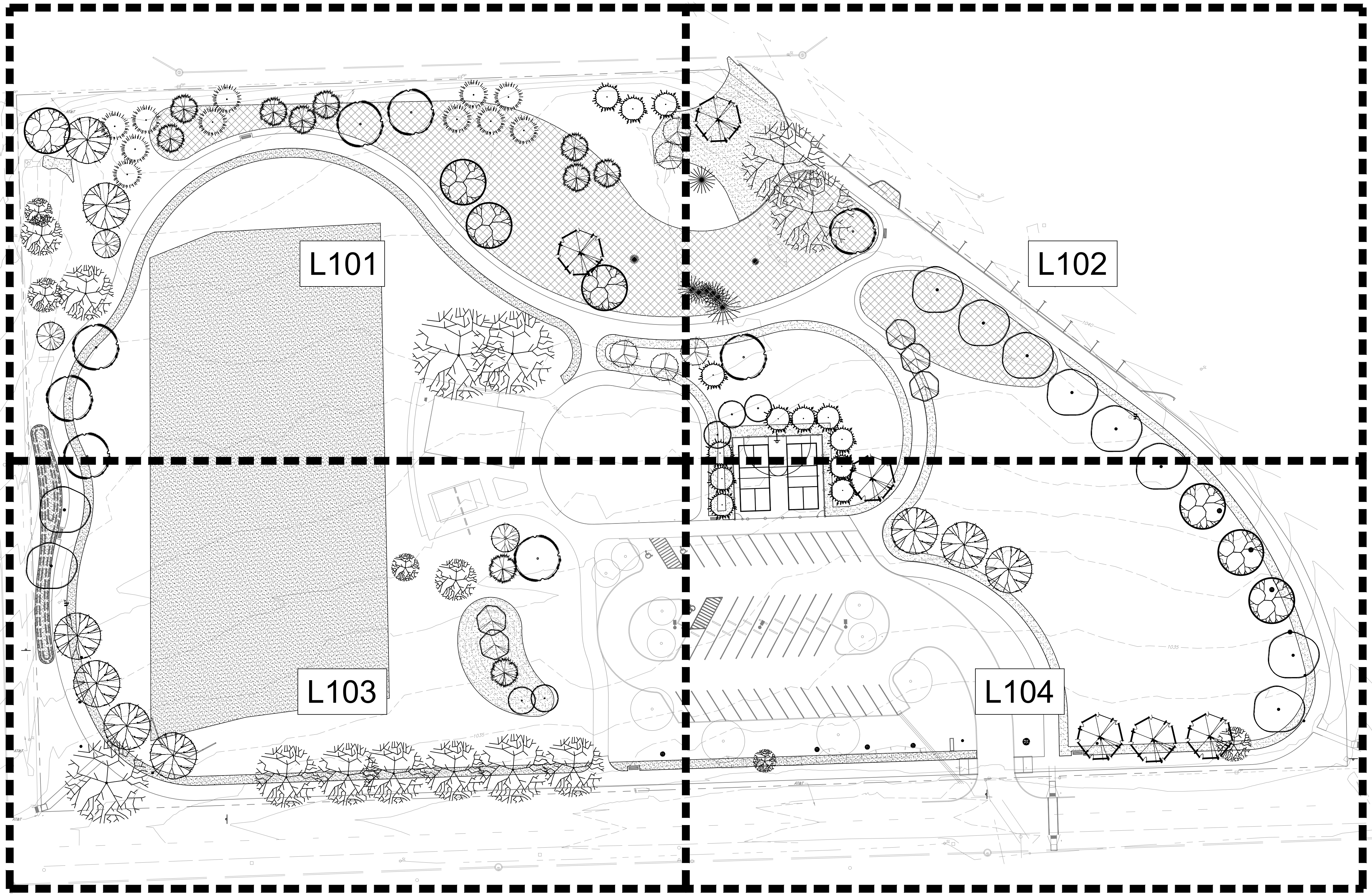
- PLANTING NOTES:**
- SEED ALL AREAS WITHIN CONTRACT LIMITS, NOT COVERED BY PAVING, BUILDINGS, OR SOD, UNLESS OTHERWISE NOTED.
 - PLANT QUANTITIES ARE FOR INFORMATION ONLY; DRAWING SHALL PREVAIL IF CONFLICT OCCURS.
 - NOTIFY LANDSCAPE ARCHITECT AFTER STAKING IS COMPLETED AND BEFORE PLANT PITS ARE EXCAVATED.
 - CONTRACTOR SHALL PLACE WEED BARRIER AND CEDAR MULCH AROUND ALL TREES AND IN ALL PLANTING BEDS TO A DEPTH OF 3".
 - KIND, SIZE AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK, ANSI 260-1992, OR MOST RECENT EDITION.
 - THE CONTRACTOR SHALL REPORT SUBSURFACE SOIL OR DRAINAGE PROBLEMS TO THE LANDSCAPE ARCHITECT.
 - THE CONTRACTOR SHALL SHOW PROOF OF PROCUREMENT, SOURCES, QUANTITIES AND VARIETIES FOR ALL PERENNIALS, ORNAMENTAL GRASSES, AND ANNUALS WITHIN 21 DAYS FOLLOWING THE AWARD OF CONTRACT. TIMELY PROCUREMENT OF ALL PLANT MATERIAL IS ESSENTIAL TO THE SUCCESSFUL COMPLETION AND INITIAL ACCEPTANCE OF THE PROJECT.
 - SUBSTITUTIONS SHALL ONLY BE ALLOWED WHEN THE CONTRACTOR HAS EXHAUSTED ALL SOURCES FOR THE SPECIFIED MATERIAL, AND HAS PROVEN THAT THE SPECIFIED MATERIAL IS NOT AVAILABLE. THE CONTRACTOR MUST PROVIDE NAME AND VARIETY OF SUBSTITUTION TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO TAGGING OR PLANTING. SUBSTITUTIONS SHALL BE NEAREST EQUIVALENT SIZE OF VARIETY OF PLANT HAVING SAME ESSENTIAL CHARACTERISTICS.
 - ALL PLANT MATERIAL SHALL BE NURSERY GROWN, SOUND, HEALTHY, VIGOROUS AND FREE FROM INSECTS, DISEASE AND INJURIES, WITH HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES. SIZES SHALL BE EQUAL TO OR EXCEEDING SIZES INDICATED ON THE PLANT LIST. THE CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITY AS SHOWN ON THE DRAWINGS.
 - STAKE OR PLACE ALL PLANTS IN FIELD AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT FOR APPROVAL BY THE OWNER PRIOR TO PLANTING.
 - THE VARIOUS PLANTS IN PLANT MIXES TO BE DISPERSED RANDOMLY SO ALL SPECIES ARE SPREAD THROUGHOUT THE DESIGNATED PLANTING AREAS.
 - APPROXIMATE TREE PLANTING DATE: BETWEEN SEPTEMBER AND OCTOBER 2023/4
 - ALL DISTURBED AREAS FROM CONSTRUCTION SHALL BE RE-SEEDDED UNLESS CALLED OUT AS OTHER PLANTING. A 6' SEEDING BUFFER IS TO BE USED ALONG NEW CONCRETE PATHS
 - ALL GRASSES, PERENNIALS AND ANNUALS HAVE BEEN VERIFIED BY THE NE KS REGION OF THE KANSAS STATE EXTENSION OFFICE FOR NATIVE CONFORMANCE AND NON INVASIVE SPECIES.

CONFLUENCE
 LANDSCAPE ARCHITECT
CONFLUENCE
 417 Delaware Street
 Kansas City, MO 64105
 816.531.7227
 www.thinkconfluence.com



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL



MOHAWK PARK PHASE 2
 MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN

L100

01 L100 PLANTING PLAN



THE LINE SHOWN ABOVE IS
 EITHER A CENTERLINE OR
 SHEET'S ORIGINAL LARGE SIZE

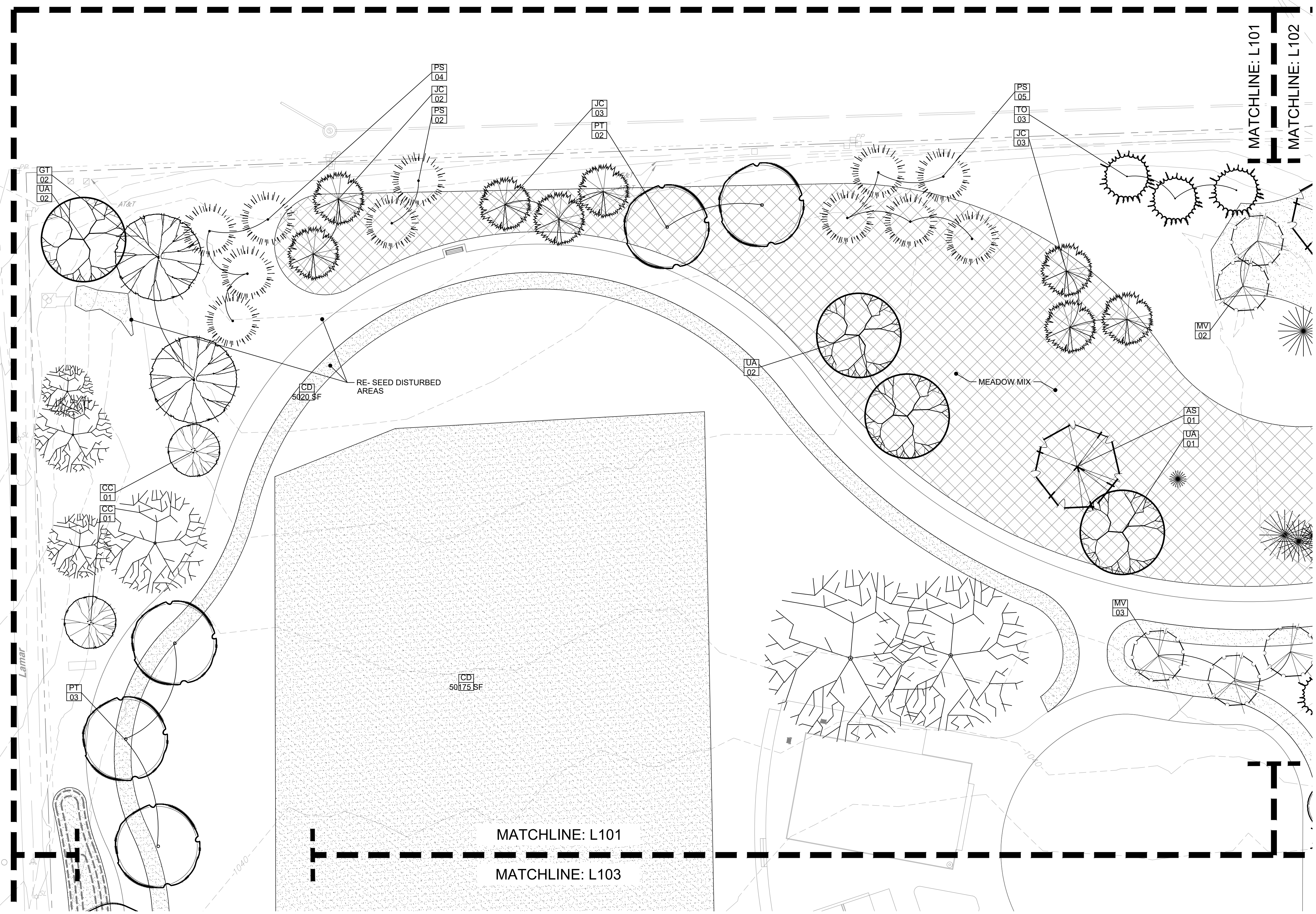
D

C
 THE SQUARES ABOVE ARE COLOR
 WITH PRINTING TO CORRECTLY
 IF PRINTED CORRECTLY

C

B

A



MATCHLINE: L101
 MATCHLINE: L102

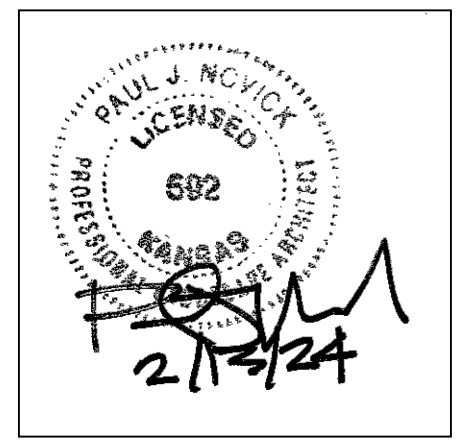
RE-SEED DISTURBED AREAS

MEADOW MIX

MATCHLINE: L101

MATCHLINE: L103

02
 L101 PLANTING PLAN ENLARGEMENT



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

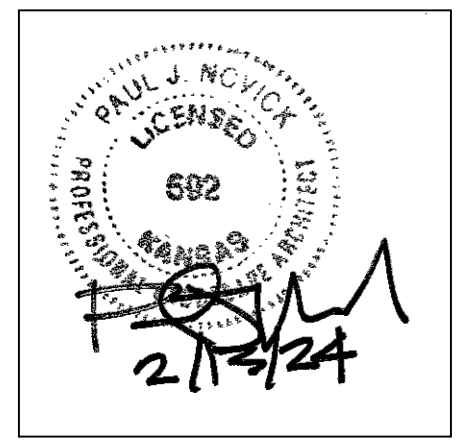
MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN
 ENLARGEMENT

L101



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2
 MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

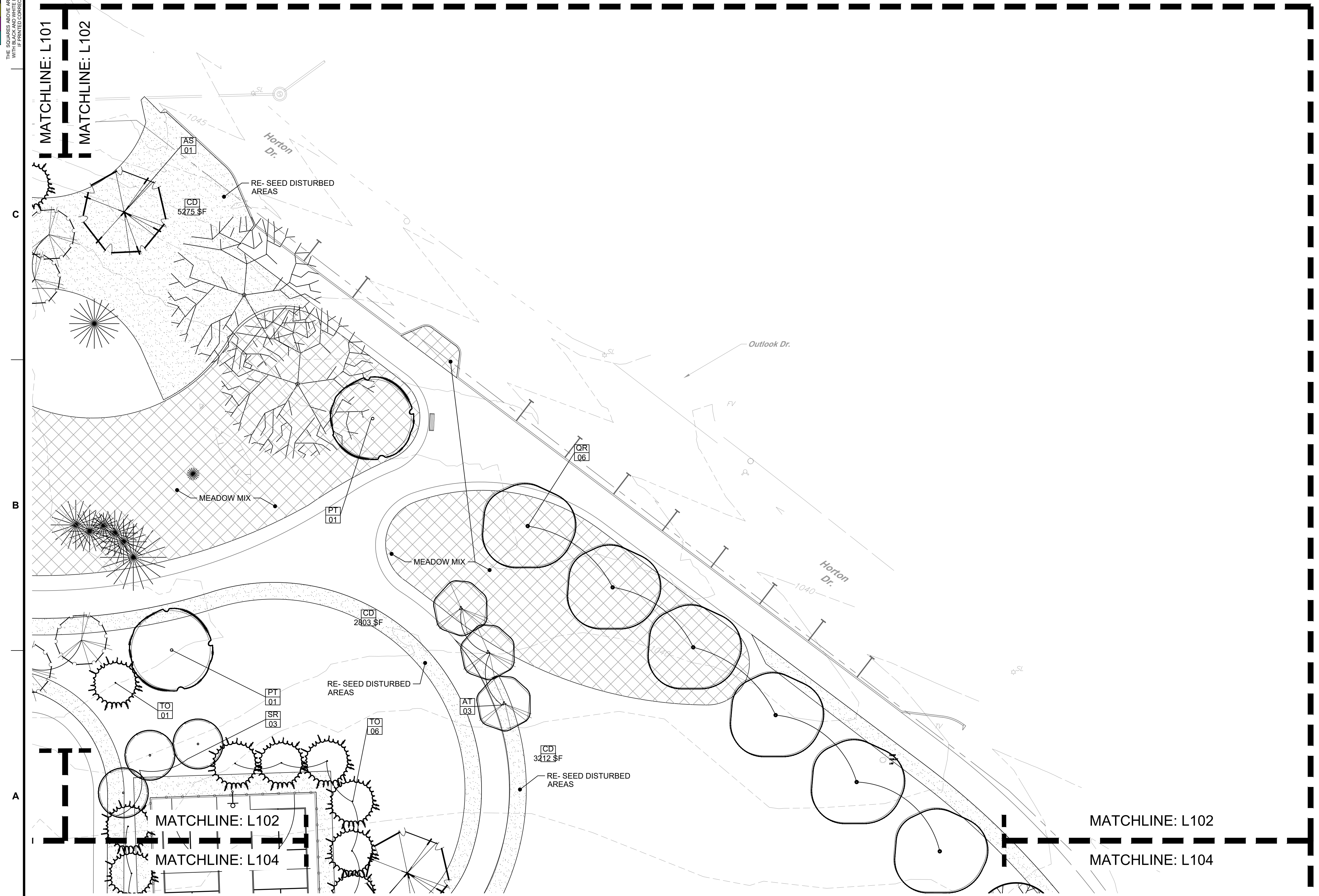
Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN
 ENLARGEMENT

L102

THE LINE SHOWN ABOVE IS
 EITHER AN ENLARGEMENT
 OF THE ORIGINAL LAYOUT OR
 THE ORIGINAL LAYOUT

THE SQUARES ABOVE ARE COLOR
 WITH AN AREA OF 100 SQUARE
 FEET. IF PRINTED CORRECTLY,
 THEY SHOULD APPEAR AS
 SHOWN.

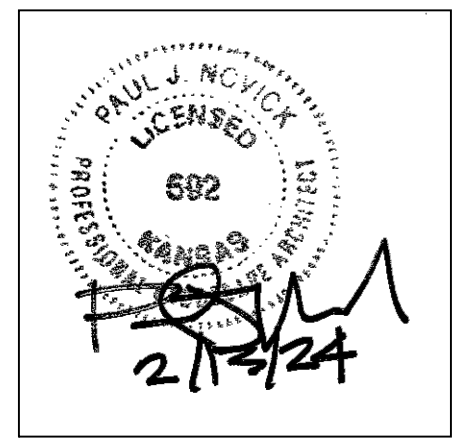
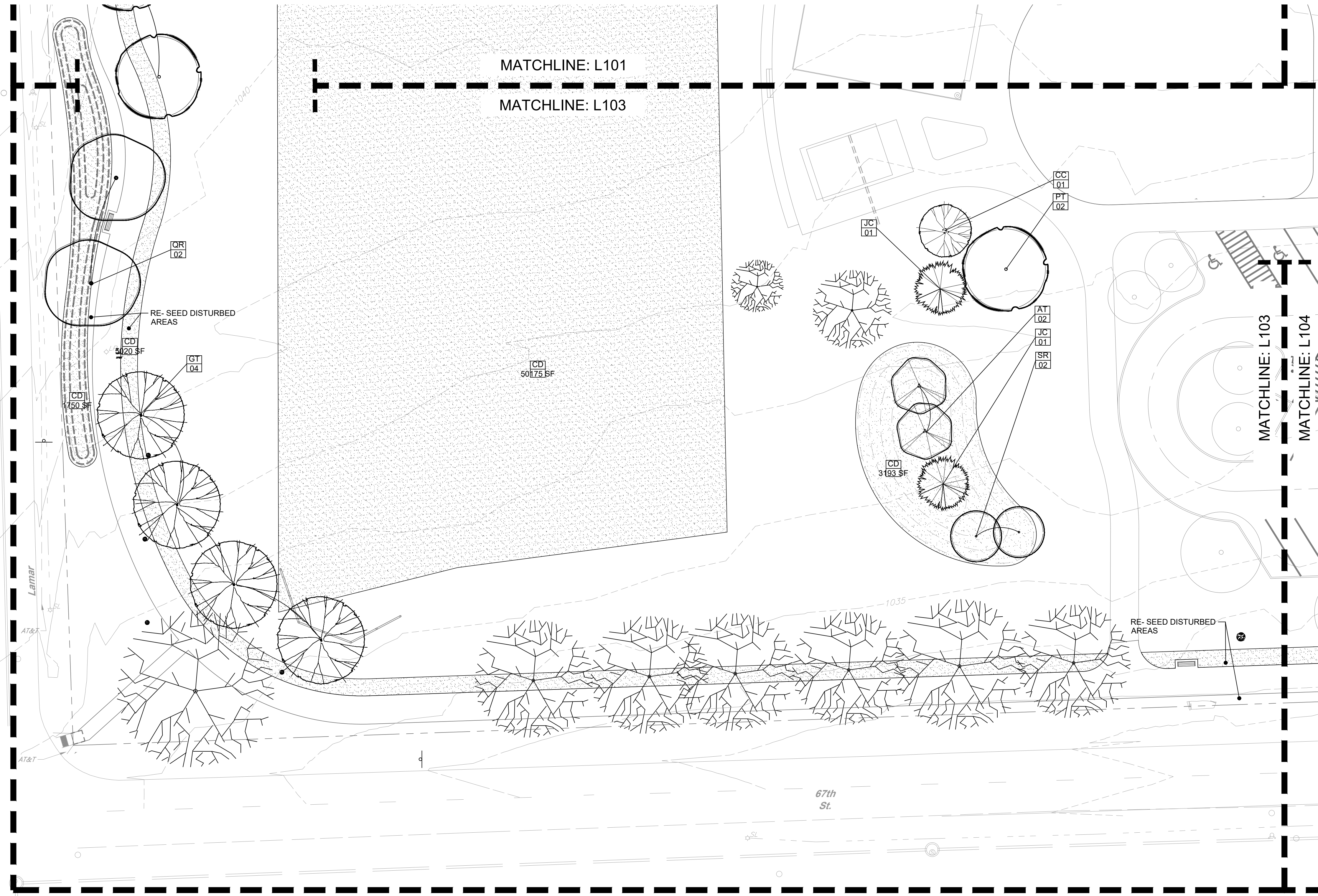


03
 L102 PLANTING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS
 EITHER AN ENLARGEMENT
 OF THE ORIGINAL SCALE SIZE
 OR A COPY OF THE ORIGINAL
 SCALE SIZE.

C M Y K
 THE SQUARES ABOVE ARE COLOR
 CHECKS. PRINT WITH A QUALITY
 PAPER AND A QUALITY PLOTTER.
 IF PRINTED CORRECTLY,
 THE SQUARES SHOULD APPEAR
 AS SHOWN.

D
 C
 B
 A



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN
 ENLARGEMENT

L103

04
 L103 PLANTING PLAN ENLARGEMENT



THE LINE SHOWN ABOVE IS ENLARGED FOR CLARITY. THE SQUARES ABOVE ARE COLOR MATCHES TO THE ORIGINAL SHEET'S ORIGINAL LINE SIZE.

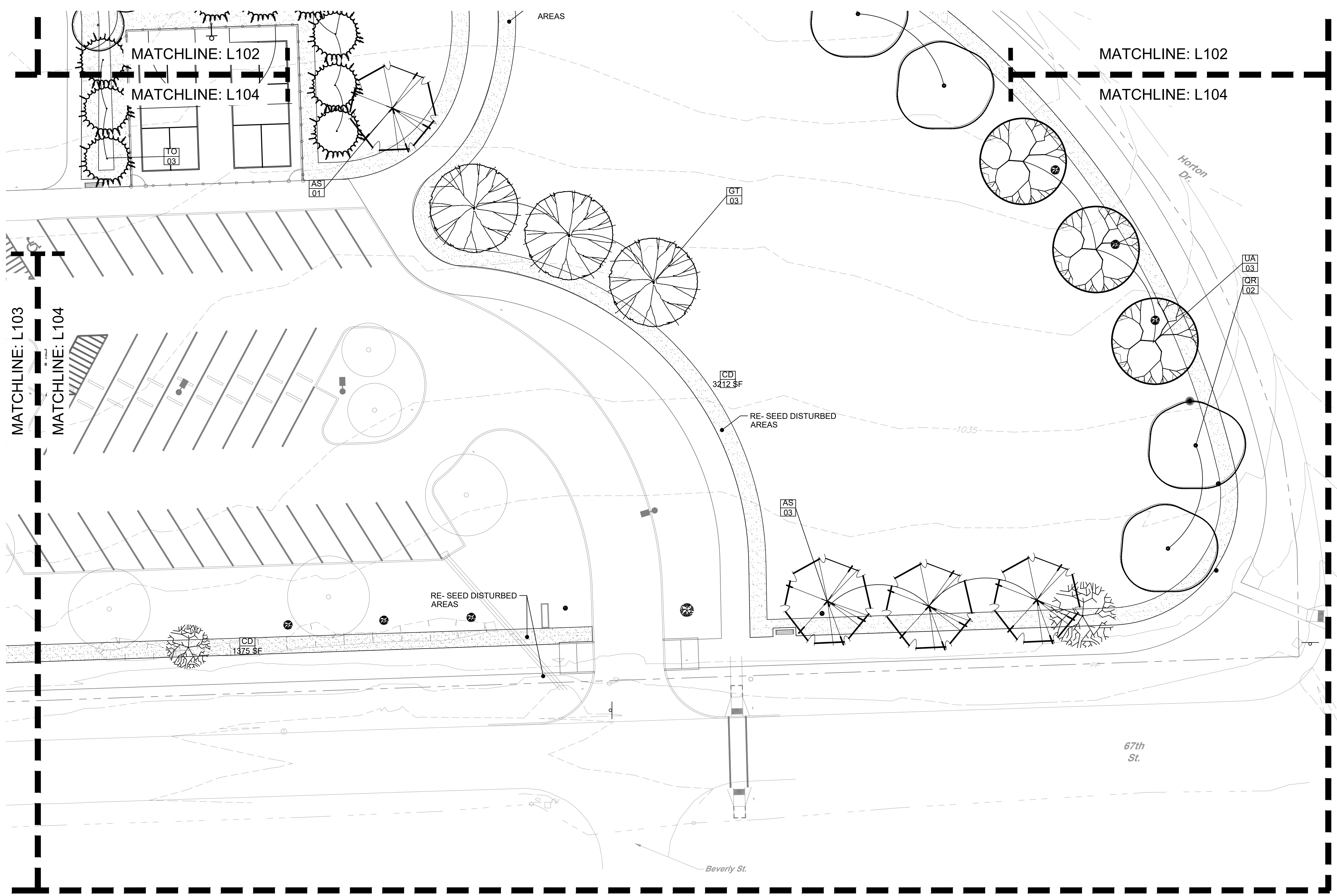
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THE SQUARES ABOVE ARE COLOR MATCHES TO THE ORIGINAL SHEET'S ORIGINAL LINE SIZE. IF PRINTED CORRECTLY, THE SQUARES SHOULD BE IDENTICAL.

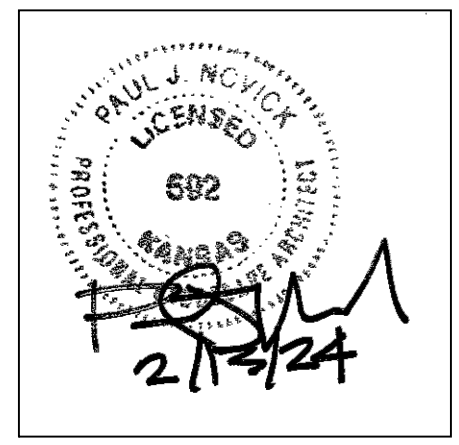
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B

A



05 L104 PLANTING PLAN ENLARGEMENT



Revision Schedule

No.	Date	Description
01	02-13-2024	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN
 ENLARGEMENT

L104

**MOHAWK PARK PHASE 2
6649 LAMAR STREET
MISSION, KS 66202**

**NPDES Storm Water Pollution Prevention Plan for
Storm Water Discharges Associated with
Construction Activity**

Confluence

Project No. 23093

November 2023 to August 2024

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Section 2.....	Notice of Intent
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Section 6.....	BMP Tracking Map & Land Disturbance Tracking Log
Section 7.....	BMP Specification and Detail Sheets
Section 8.....	Log of Amendments
Section 9.....	Local Regulations and Additional Permits
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Section 14	Regulatory Correspondence
Section 15	Notice of Termination

SECTION 1

Delegation Statements & Contractor Certifications

Delegation Statement(s) for applicable personnel should be kept in this section. Contractor Certification Statements that contain contact information for those responsible for specific activities on the project should also be kept here.

Delegation of Authority

I, _____, hereby designate the person(s) or specifically described position(s) below to be an authorized representative(s) for the purpose of overseeing compliance with environmental requirements, including the Kansas Water Pollution Control and NPDES Stormwater Runoff from Construction Activities General Permit.

Authorized Representative:

Name or Position: _____

Company: _____

Address: _____

Phone: _____

Email: _____

The designated authorized representative should complete a Contractor/Subcontractor Certification located in Section 1 of the SWPPP signifying they have read, understand and will adhere the requirements set forth in the SWPPP.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Permittee Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Delegation of Authority

I, _____, hereby designate the person(s) or specifically described position(s) below to be an authorized representative(s) for the purpose of overseeing compliance with environmental requirements, including the Kansas Water Pollution Control and NPDES Stormwater Runoff from Construction Activities General Permit.

Authorized Representative:

Name or Position: _____

Company: _____

Address: _____

Phone: _____

Email: _____

The designated authorized representative should complete a Contractor/Subcontractor Certification located in Section 1 of the SWPPP signifying they have read, understand and will adhere the requirements set forth in the SWPPP.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Permittee Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Contractor/Subcontractor Certification

Project Name: Mohawk Park phase 2

Permit Number: _____

Project Owner: City of Mission, Kansas

As a contractor/subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform or oversee on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review upon request.

Each contractor/subcontractor engaged in activities at the construction site that could impact stormwater should be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the project named above:

Service Provided: _____

Company Name: _____

Address: _____

Telephone: _____

Representative: _____

Title: _____

Signature: _____

Date: _____

Contractor/Subcontractor Certification

Project Name: Mohawk Park phase 2

Permit Number: _____

Project Owner: City of Mission, Kansas

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Signature: _____

Date: _____

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Project Name: Mohawk Park phase 2

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Title: _____

Signature: _____

Date: _____

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Address: _____

Telephone: _____

Representative: _____

Title: _____

Signature: _____

Date: _____

Contractor/Subcontractor Certification

Project Name: Mohawk Park phase 2

Permit Number: _____

Project Owner: City of Mission, Kansas

As a contractor/subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform or oversee on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review upon request.

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This certification is hereby signed in reference to the project named above:

Service Provided: _____

Company Name: _____

Address: _____

Telephone: _____

Representative: _____

Title: _____

Signature: _____

Date: _____

SECTION 2

Notice of Intent

A copy of the signed Notice of Intent for Authorization to Discharge Stormwater Runoff from Construction Activities can be found here as well as a copy of a Notice of Transfer of Owner/Operator form should it be needed. Individual Lot Certifications should be placed in this section when applicable.



NOTICE OF INTENT (NOI)

For Authorization to Discharge Stormwater Runoff from Construction Activities
 In accordance with the Kansas Water Pollution Control General Permit
 Under the National Pollutant Discharge Elimination System (NPDES)

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form requests authorization for coverage under the Kansas Water Pollution Control general permit, or KDHE issued successor permits, issued for stormwater runoff from construction activities in the State of Kansas. Becoming a permittee obligates the discharger to comply with the terms and conditions of the general permit. **Completion of this NOI does not provide automatic coverage under the general permit. Coverage is provided and discharge permitted when the Kansas Department of Health and Environment (KDHE) authorizes the discharge of stormwater runoff from the construction activities identified on the NOI and supporting documentation. A signed and dated copy of the first page of the NOI indicating the Authorization will be provided to the owner or operator, or all three pages for Conditional Authorizations.** Upon authorization of the construction activity discharge, a Kansas permit number and a Federal permit number will be assigned to the construction project. **A complete request for Authorization for coverage under the general permit must be submitted or the request will not be processed (see listing on Page 3 of this NOI).** KDHE will notify owners or operators whose Notice of Intent (NOI) and supporting documentation for Authorization of stormwater runoff associated with construction activities are incomplete, deficient, or denied.

Please Print or Type.

I. OWNER OR OPERATOR ADDRESS, BILLING, CONTACT & RECORDS LOCATION INFORMATION

<p>A. Owner or Operator's Name: <u>City of Mission, Kansas</u> Company Name: <u>City of Mission, Kansas</u> Owner or Operator's Phone: <u>City of Mission, Kansas</u> Mailing Address: <u>6090 Woodson Street</u> City: <u>Mission</u> State: <u>KS</u> Zip: <u>66202</u> E-mail Address (optional): _____</p> <p>B. Billing Contact Name: <u>Laura Smith</u> Billing Contact Phone: <u>(913) 676-8352</u> Billing Address (if different): _____ City: <u>Mission</u> State: <u>KS</u> Zip: <u>66202</u> E-mail Address (optional): _____</p>	<p>C. Contact Name: <u>Laura Smith</u> Company Name: <u>City of Mission, Kansas</u> Contact Phone: <u>(913) 676-8352</u> Mailing Address: <u>6090 Woodson Street</u> City: <u>Mission</u> State: <u>KS</u> Zip: <u>66202</u> E-mail Address (optional): _____</p> <p>D. Address where records will be kept (if not on-site): Records Address: <u>On-Site</u> City: _____ State: _____ Zip: _____</p>
--	---

II. SITE INFORMATION, Type of Request: New Permit Authorization Modification of Existing Permit Authorization

<p>A. Project Name: <u>Mohawk Park Phase 2</u> Site Address: <u>6649 Lamar Street</u> City: <u>Mission</u> State: <u>KS</u> Zip: <u>66202</u> (Nearest City to Project) County: <u>Johnson</u></p>	<p>B. LEGAL SITE DESCRIPTION: _____ QTR of _____ QTR of _____ QTR Section: <u>17</u> Township: <u>12</u> South; Range: <u>25</u> <input checked="" type="checkbox"/> E <input type="checkbox"/> W Latitude: <u>39° 0' 30.1"</u>, Longitude: <u>-94° 39' 24.9"</u> Deg. Min. Sec. Deg. Min. Sec.</p>
---	--

For Official Use Only:

Received	Amount Paid:	
	Date:	Reviewer
	Initials:	Authorized: <input type="checkbox"/> Y; <input type="checkbox"/> N
	Check No.:	Is Authorization Conditional? <input type="checkbox"/> Y; <input type="checkbox"/> N
Authorized by:		(if yes, see page 3 of NOI for conditions)
Secretary, Kansas Department of Health and Environment		Date
KS Permit No.: _____		Federal Permit No.: _____

Send completed 3 page NOI form **with original signature** and all appropriate submittals (see page 3 of NOI) to:

Kansas Department of Health and Environment
 Bureau of Water, Industrial Programs Section
 1000 SW Jackson, Suite 420
 Topeka, KS 66612-1367

Note: A copy of the permit can be obtained at: www.kdheks.gov/stormwater or by submitting a written request to KDHE.

KDHE Contact Information:
 Phone: (785) 296-5545
 E-mail: kdhe.stormwater@ks.gov

C. EXISTING CONDITIONS/USES

- 1) Is any part of the project located on Indian Country land? Y; N
If yes: Contact EPA regarding discharging stormwater runoff from industrial activities on Indian Country land.
- 2) If stormwater runoff drains to or through a Municipal Separate Storm Sewer System (MS4): MS4 Name: _____
- 3) Name of the first receiving water, stream, or lake: Brush Creek, River Basin: Blue
- 4) Are contaminated soils present on the site or is there groundwater contamination located within the site boundary? Y; N
If yes: On separate paper describe in detail the locations and concentrations of the contaminants.
- 5) Are there any contaminated soils that will be disturbed or any contaminated groundwater that will be pumped by the proposed construction activity? Y; N
If yes: On separate paper describe the special procedures and erosion and sediment control measures to be implemented to eliminate or minimize the potential to discharge the soil and/or groundwater contaminants.
- 6) Are there any surface water intakes for public drinking water supplies located within 1/2 mile of the site discharge points? Y; N
- 7) Are there any known historical or archeological sites present within the site boundary or any historic structures located within 1000 feet of the project site? Y; N
Note: Include documentation of project-specific coordination with the Kansas Historical Society in making this determination.
- 8) Is any threatened or endangered species habitat located within the site boundary or in the receiving water body? Y; N
Note: Include documentation of project-specific coordination with the Kansas Department of Wildlife, Parks & Tourism in making this determination.
- 9) Will the project impact the line or grade of a stream or does it include dredge or fill of a potential jurisdictional water body or wetlands? Y; N
If yes: Include documentation of project-specific coordination with the US Army Corps of Engineers and/or the Kansas Department of Agriculture, Division of Water Resources in making this determination.
- 10) Are any Critical Water Quality Management Areas, Special Aquatic Life Use Waters, or Outstanding National Resource Waters located within 1/2 mile of the facility boundary? Y; N
If yes: List the names of all such areas and waters: _____

D. PROJECT DESCRIPTION

- 1) Project Description: The second phase of the Mohawk Park project includes installation of a new loop trail, a half-court basketball / pickleball Court and a new all inclusive playground. A planting plan incorporating shade and vibrant plants will be an attraction around the site.
- 2) Does this NOI include all proposed soil disturbing activities associated with the entire common plan of development? Y; N
If no: Explain what development areas of the site are not included in this NOI and provide contact information, if available, for the party or parties that own or have operational control of these areas:

- 3) Anticipated project Start Date: November 2023, and Completion Date: April 2024
- 4) Estimated total area to be disturbed: 2.3 Acres Total area of the site: 7.82 Acres
- 5) Do you plan to disturb ten or more acres that are within a common drainage area? Y; N
If yes: Will a sedimentation basin be installed in that drainage area? (Attach design calculations for each sedimentation basin.) Y; N
 If a sediment basin is not feasible, on a separate sheet describe similarly effective erosion and sediment control measures to be implemented in lieu of a sedimentation basin.

E. Maps

Include an area map showing the outline of the construction site and the topographic features of the area at least one mile beyond the project site.

F. EROSION CONTROL PLAN AND BEST MANAGEMENT PRACTICES

- 1) Provide a summary of the sequence of major soil disturbing activities including installation of the corresponding stormwater management and pollution control features.
- 2) Provide one or more site plans covering the anticipated soil disturbing activities showing the limits of disturbance, the existing and proposed elevation contours, the types and locations of erosion/sediment control measures and stormwater management/pollution control features during each phase of construction and the locations where stormwater runoff leaves the construction site.

SECTION 3

Permit Authorization & Kansas Water Pollution Control and NPDES Stormwater Runoff from Construction Activities General Permit

Permit authorization from the KDHE and a copy of the Kansas Water Pollution Control and NPDES Stormwater Runoff from Construction Activities General Permit will be kept in this section.

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

BUREAU OF WATER



KANSAS WATER POLLUTION CONTROL

AND

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

STORMWATER RUNOFF FROM CONSTRUCTION ACTIVITIES

GENERAL PERMIT PACKET

August 7, 2017	1.0
August 1, 2017	0.0
DATE	REVISION

Kansas Department of Health and Environment

Bureau of Water, Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, KS 66612-1367
(785) 296-5545
Email address: kdhe.stormwater@ks.gov

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EXECUTIVE SUMMARY

Purpose of this General NPDES Permit

The purpose of this general permit is to implement the Federal Water Pollution Control statutes and regulations; to permit discharges of stormwater runoff from construction sites subject to National Pollutant Discharge Elimination System (NPDES) permit requirements; and to protect the waters of the State from sediment and other contaminants.

What is Covered

This permit covers the discharge of stormwater runoff from construction activities that may disturb a cumulative total area equal to or greater than one (1.0) acre or from construction activity that is part of a larger common plan of development or sale that may disturb a cumulative total area equal to or greater than one (1.0) acre. Owners or operators of construction activities which discharge stormwater runoff and which may disturb an area equal to or greater than one (1.0) acre or are part of a larger common plan of development must receive authorization to discharge stormwater runoff from construction activities under this NPDES general permit.

Owners or operators of construction activities which disturb less than one acre (<1.0 acre) and which are not part of a larger common plan of development or sale must have authorization to discharge stormwater runoff from construction activities under this NPDES general permit when KDHE believes the water quality impact warrants consideration.

Subdivision developments are considered to be a larger common plan of development or sale regardless of the size, ownership, or number of lots or parcels within the development. Each subdivision requires a permit to discharge stormwater if construction activities during the life of the development may disturb a cumulative total area equal to or greater than one (1.0) acre. New owners of lots or parcels that are less than 1 acre in size and are within an authorized larger common plan of development must either complete a KDHE Individual Lot Certification (ILC) or have similar wording included in the lot purchase contract. The ILC is an agreement between the new owner of the lot or parcel and the permittee to implement the SWP2 Plan and the conditions of the NPDES general permit cooperatively. For lots or parcels that are equal to or greater than one (1.0) acre in size, the new owner must request separate Authorization for coverage under the construction stormwater general permit unless the lots or parcels are for construction of residential homes, in which case the ILC procedure may be utilized.

How to Obtain a Permit

A request for Authorization for coverage under the construction stormwater general permit is made by fully completing and submitting a construction stormwater "Notice of Intent" (NOI) form, the \$60 permit fee, and all needed supporting documents. The NOI form is a request for coverage under the requirements and conditions of the Kansas "Stormwater Runoff from Construction Activities General Permit". The form and the instructions for completing the form are available upon written request from the Kansas Department of Health and Environment or may be downloaded from the [KDHE Stormwater Website \(www.kdheks.gov/stormwater\)](http://www.kdheks.gov/stormwater). The NOI needs to be sent to KDHE at least 60 days before starting construction. KDHE will make every effort to either authorize the construction activities within 60 days or provide comments on application or Stormwater Pollution Prevention Plan deficiencies. Construction site soil disturbing activities may commence only when the owner or operator receives an Authorization for the construction activity from KDHE Bureau of Water.

Authorization for the construction activity will be indicated on the NOI form. Upon authorization of the construction activity and associated stormwater discharges a Kansas permit number and a Federal permit number will be assigned to the construction project and indicated on the NOI form. A signed and dated copy of the Authorization will be provided to the owner or operator.

EXECUTIVE SUMMARY

What the Permit Costs

The permit fee is established by regulation (K.A.R. 28-16-56 et seq. as amended). At the time this information packet was developed, the permit fee for this general permit for stormwater runoff from construction activities was \$60 per year.

What the Permit Requires

The primary requirement of the general permit is for the permittee to develop and implement a Stormwater Pollution Prevention (SWP2) Plan. The SWP2 Plan must contain certain items that are specified in the general permit including the "Best Management Practices" that will be utilized to control erosion and sediment discharges and reduce the potential for contamination of the stormwater runoff associated with construction activities.

When the soil disturbing activities are completed and final stabilization of the site is achieved, the permittee must notify KDHE to terminate the authorization to discharge. To maintain Authorization to discharge stormwater runoff from construction activities the permittee will need to pay an annual permit fee, as specified in K.A.R. 28-16-56 et seq., until final site stabilization is obtained and Authorization is terminated.

The permittee is required to comply with all of the applicable provisions, requirements, conditions, and limits listed in the general permit. This summary is provided for information only and does not describe all of the applicable requirements in the general permit.

Availability of Forms and Information

Copies of all forms, references, and the NPDES general permit can be downloaded from the [KDHE Stormwater Website](http://www.kdheks.gov/stormwater) at <http://www.kdheks.gov/stormwater>.

Copies of all forms, references and the NPDES general permit requirements may also be obtained by writing to:

Kansas Department of Health and Environment
Bureau of Water - Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, KS 66612 – 1367

or by e-mail to:

kdhe.stormwater@ks.gov

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

BUREAU OF WATER



KANSAS WATER POLLUTION CONTROL

AND

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

STORMWATER RUNOFF FROM CONSTRUCTION ACTIVITIES

GENERAL PERMIT

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**National Pollutant Discharge Elimination System (NPDES)
Stormwater Runoff from Construction Activities General Permit**

**Permit No. S-MCST-1703-1
Federal Permit No. KSR100000**

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	- Notice of Termination form (NOT)

Please note: *The Department has provided several options for obtaining copies of these forms, but at this time the Department cannot accept electronic submittals (e-mail or fax) of completed forms. Original copies of all forms must be received before permit/exclusion requests can be processed.*

Upon request, KDHE will provide copies of State published information. EPA and/or NTIS contact information will be provided in response to requests for Federal Publications.

Kansas Water Pollution Control General Permit
and Authorization to Discharge

STORMWATER RUNOFF FROM CONSTRUCTION ACTIVITIES

Under the National Pollutant Discharge Elimination System

Pursuant to the Provisions of Kansas Statutes Annotated 65-164 and 65-165; the Federal Water Pollution Control Act as amended (33 U.S.C. 1251 et seq.; the "Clean Water Act"); and the Kansas Surface Water Quality Standards (K.A.R. 28-16-28 et seq.); this NPDES general permit provides the requirements and conditions under which the permittee is authorized to discharge stormwater runoff from construction activities.

Coverage is provided and construction Stormwater discharge is authorized when the Kansas Department of Health and Environment (KDHE) issues an Authorization to discharge stormwater runoff from construction activities until the Authorization is revoked/terminated. A signed and dated copy of the Authorization will be provided to the permittee.

Upon Authorization, the Permittee is allowed to discharge stormwater runoff from construction activities described in the Notice of Intent for Stormwater Runoff from Construction Activities and supporting documents in accordance with the requirements and conditions of this NPDES General Permit and the Stormwater Pollution Prevention Plan developed for the identified construction activities.

This NPDES general permit is effective August 1, 2017 through July 31, 2022.

(signed by Secretary Susan Mosier, MD)
Secretary, Kansas Department of Health and Environment

July 14, 2017
Date

AUTHORIZED ACTIVITY DESCRIPTION:

Construction Activities

Construction activities consist of any activity (e.g. clearing, grubbing, excavating, and grading) which disturb a cumulative total of one (1.0) or more acres or when the site is a part of a larger common plan of development or sale which will disturb a cumulative total of one or more acres.

Owners or operators of construction activities which disturb less than one acre (<1.0 acre), and which are not part of larger common plan of development or sale, must have authorization to discharge stormwater runoff from construction activities under this NPDES general permit when KDHE notifies the owner or operator that the water quality impact from discharge of stormwater runoff from construction activity warrants consideration because the proposed construction activities constitute a significant pollution potential.

Permit coverage is not required for routine maintenance (see endnote 7, page 21), for certain demolition and linear projects and for certain project support activities as specified in Part 1.1 of this permit.

Upon issuance of this NPDES General Permit, owners or operators who intend to engage in construction activities as indicated above shall obtain authorization to discharge stormwater runoff under this NPDES general permit prior to commencing construction activities at the project site. To obtain authorization to discharge stormwater runoff, the owner or operator of a construction site needs to submit a Notice of Intent (NOI) for the discharge of stormwater runoff from construction activities at least 60 days prior to removing vegetation or disturbing soil at the site to avoid any unplanned delays in the start of construction. The NOI form is a request for coverage under the requirements and conditions of this NPDES general permit. To obtain authorization, the NOI form and supporting documents shall be submitted in accordance with Part 4 of this NPDES general NPDES permit. Upon acceptance of the NOI and supporting documents, KDHE will indicate the authorization for coverage under the NPDES general permit on the first page of the NOI form, assign permit numbers, and indicate the KDHE issuance of the Authorization with the Department Secretary's signature. The owner or operator is then authorized to discharge stormwater runoff from construction activities under the provisions of this NPDES general permit and may commence construction activities at the site described in the NOI and supporting documents in accordance with the terms and conditions expressed in this NPDES general permit and in conformance with the stormwater pollution prevention plan developed for the site.

Owners or operators who received authorization to discharge under the previous Stormwater Runoff from Construction Activities General Permit S-MCST-0312-1, may continue to operate under those permit provisions, conditions, requirements, limits, site specific authorized Best Management Practices (BMPs), and site specific authorized Stormwater Pollution Prevention Plan (SWP2 Plan) until 18 months after permit issuance as provided for in Part 6.1 of this permit.

Rather than submitting an NOI, owners or operators who intend to engage in construction activity that will disturb between one (1) and five (5) acres may request a rainfall erosivity waiver. To receive a waiver, the owner or operator of a construction site shall submit a rainfall erosivity waiver application form at least 60 days prior to removing vegetation or disturbing soil at the site. To be authorized, the small construction activity must have a low predicted rainfall potential that corresponds to a rainfall erosivity factor of less than 5 as calculated by the Revised Universal Soil Loss Equation [RUSLE]. The rainfall erosivity waiver application form is available on the [Kansas Stormwater Website](#) (see endnote 1, page 20). Copies can also be obtained by writing or e-mailing KDHE at the addresses in Part 10.2. Prior to commencing construction, the owner or operator must receive a copy of the authorized rainfall erosivity waiver from KDHE prior to initiation of construction activities at the site.

Any owner or operator who is subject to NPDES permit requirements for stormwater runoff from construction activities and who discharges stormwater runoff from construction activities prior to receiving authorization from KDHE is in violation of both State and Federal laws.

PREFACE

The purpose of this NPDES general permit is to implement the Federal Water Pollution Control statutes and regulations; permit discharges of stormwater runoff from construction sites subject to National Pollutant Discharge Elimination System (NPDES) permit requirements; and to protect waters of the State from sediment and other contaminants.

The issuance of an authorization to discharge under this NPDES general permit allows a project owner or operator, after implementation of the project site stormwater pollution prevention plan, to commence construction site soil disturbing activities that can produce or potentially produce a discharge of contaminated stormwater runoff to surface waters of the State of Kansas. In the absence of information demonstrating otherwise, KDHE expects that compliance with provisions and conditions in this permit will result in the discharge of stormwater being controlled as necessary to meet applicable Kansas surface water quality standards.

This NPDES general permit does not authorize the placement of fill materials in a flood plain, the obstruction of stream flow, directing stormwater runoff across private property, increasing stormwater runoff flow, changing the channel of a defined drainage course, etc. This NPDES general permit is intended to address only the quality of the stormwater runoff and to minimize off-site migration of sediments or other pollutants.

KDHE administers a number of regulatory programs that may preclude the initiation of construction activities until such time as a specific permit is issued or authorization is granted. This NPDES general permit authorization solely addresses NPDES stormwater discharge requirements for construction activities. It is the obligation of the permittee to ensure compliance with all other KDHE, State, Federal and local statutory and regulatory requirements.

Owners or operators seeking coverage under this NPDES general permit which have the potential to impact threatened or endangered species or historical sites can obtain information regarding regulatory requirements or special conditions which may be applicable to the activities covered by this permit from the Kansas Department of Wildlife, Parks, and Tourism (KDWP&T) or the Kansas Historical Society (KSHS) respectively (See NOI instructions for contact information).

Other appropriate agencies should be contacted to determine the need for additional permits, authorizations, or requirements, if any. In particular the applicant should contact the local municipal separate storm sewer system

(MS4) agency (see endnote 2, page 20). Other agencies the applicant should contact include the United States Army Corps of Engineers; Kansas Department of Agriculture, Division of Water Resources; and any other local governments or agencies that are not listed herein that may have jurisdiction.

Authorization to Discharge under this NPDES general permit does not constitute approval of the project under the provisions of the Kansas Water Projects Environmental Coordination Act, and does not relieve the permittee of the responsibility to comply with the requirements of other Agencies prior to commencement of construction activities.

Part 1. WHO MUST OBTAIN AUTHORIZATION TO DISCHARGE

Owners or operators of construction activities which may disturb one (1.0) or more acres of soil or are part of a larger common plan of development or sale which may disturb a cumulative total of one (1.0) or more acres of soil must obtain authorization to discharge stormwater runoff from construction activities.

Owners or operators of construction activities which disturb less than one acre (<1.0 acre) of soil, and are not part of larger common plan of development or sale, must have authorization to discharge stormwater runoff from construction activities under this NPDES general permit when KDHE believes the water quality impact warrants consideration or KDHE determines the construction activities constitute a significant pollution potential (i.e., sites that will disturb contaminated soils, contaminated groundwater, or sites adjacent to sensitive waters).

Soil disturbing activities where contaminated soils or contaminated groundwater may be present on the site are reviewed by KDHE on a case-by-case basis and may require coverage under this NPDES general permit or an individual permit even if less than one acre (< 1.0 acre) of soil is disturbed. For sites where contaminated soil or groundwater is present, contact KDHE Bureau of Water - Industrial Programs Section at (785) 296-5549 for a determination on the need for coverage under this NPDES general permit.

Platted subdivision projects must obtain coverage for all areas of the subdivision site. Subdivision projects that have roads and/or utilities constructed under separate contract (e.g., city assessment district) may need to have two concurrent discharge authorization requests (NOIs) for coverage under the NPDES general permit submitted. The owner (developer) of the subdivision project must maintain coverage for the individual lot construction sites. Owners that have control over the construction activities

of the entire subdivision site, including roads and utilities, need only submit one discharge authorization request (NOI) for coverage under the NPDES general permit.

Soil disturbing activities in response to a public emergency (e.g., tornado, earth quake, flood, ice storm, rail or highway incidents) where the related work requires immediate soil disturbance to avoid imminent endangerment to the public health or the environment is allowed without formal submittal and authorization by KDHE if the owner or operator implements soil erosion and sediment control as soon as possible after the emergency conditions have been resolved and a Notice of Intent application form for coverage under this permit is submitted within 30 days after the start of emergency soil disturbing activities showing the areas disturbed and the soil and erosion controls provided.

1.1 Activities that Do Not Require Permit Coverage –

Construction activities do not include the following types of projects:

- a. routine maintenance that disturbs less than 5 acres (see endnote 7, page 21);
- b. structural demolition activities, including filling of basements, removal of debris and removal and replacement of pavement (even when exposing erodible soils or subsoils), which do not involve soil excavation, grading, clearing, grubbing or other soil disturbing construction activities;
- c. the linear opening of soil in a single line of two (2) feet or less in width utilizing soil plow trenching equipment that immediately closes the opening as part of the plow equipment's normal operation by filling the opening with removed soil or by the closure of the sidewalls to their original configuration after passage of the plow; however, areas disturbed by soil plow operations that open a width of more than one (1) foot must immediately be seeded with an appropriate variety of vegetative cover or stabilized with mulch or a similarly effective soil stabilizing BMP after passage of the plow equipment.

Soil disturbing activities associated with construction support activities, such as concrete batch plants, asphalt plants, soil disposal sites and borrow sites at or immediately adjacent to the supported project site are considered part of the common plan of development for the project and will need coverage under this permit through separate authorization if the support activity is not included in the supported project's stormwater pollution prevention plan. Asphalt and concrete batch plants might also need to obtain a separate water pollution control permit for wastewater generated by these facilities.

Support activities such as concrete batch plants, asphalt plants and areas of offsite soil borrow and soil disposal/fill activities may be treated as stand-alone construction projects which are not considered part of the supported project's common plan of development if runoff from the support activity site is not anticipated to significantly impact the same surface waters and stream segments that receive runoff from the supported project site.

Part 2. WHAT THIS PERMIT COVERS

Coverage under this NPDES general permit authorizes the discharge of stormwater runoff from construction activities for sites where the discharge point is located in Kansas and for discharges and construction activities that are conducted in accordance with the provisions and requirements of this permit and in accordance with the site specific stormwater pollution prevention plan from the date of Authorization until the site conditions meet the closure requirements specified in Part 9 of this permit and a Notice of Termination (NOT) is received by KDHE or the permit is revoked/terminated or placed on inactive status for cause by KDHE.

Proposed new or existing unpermitted construction stormwater dischargers, in regard to antidegradation, are eligible for authorization under this general permit to discharge to a Tier 1, 2, or 2½ Water only if the discharge will not lower the water quality of the applicable water. In the absence of information demonstrating otherwise, KDHE expects that development, installation, operation, appropriate maintenance of site specific BMPs and the SWP2 Plan as well as compliance with the provisions, conditions, requirements, and limits of this general permit will result in discharges that will not lower the water quality of the receiving surface water.

Proposed new or existing unpermitted construction stormwater dischargers that will discharge directly into Tier 3 waters (Outstanding National Resource Waters) are, in regard to antidegradation, considered temporary discharges and eligible for authorization under this general permit to discharge stormwater from construction activities but only if the discharge will not lower the water quality of the receiving water, all enhanced (significantly better and more reliable) levels of controls and best management practices are evaluated and implemented to minimize off-site migration of sediments or other pollutants. In the absence of information demonstrating otherwise, KDHE expects that development, installation, operation, appropriate maintenance of enhanced site specific BMPs and the SWP2 Plan as well as compliance with the provisions, conditions, requirements, and limits of this general permit will result in discharges that will not

lower the water quality of the receiving surface water and provide the highest protection reasonably available.

This NPDES general permit also authorizes the following non-stormwater discharges from construction sites during the life of the project:

1. Flushing water hydrants and potable water lines provided appropriate sediment and erosion controls are implemented,
2. Water used for rinsing streets or structures that does not contain cleansers, detergents, solvents or additives;
3. Irrigation to establish vegetation;
4. Discharges of uncontaminated non-turbid groundwater provided that appropriate sediment and erosion controls are implemented;
5. Discharges from emergency fire-fighting activities;
6. Water used to control dust;
7. Uncontaminated air conditioning or compressor condensate;
8. Foundation or footing drains where flows are not contaminated with process materials such as solvents or contaminated groundwater;
9. Uncontaminated construction dewatering wastewaters that have been treated by an appropriate control such as bag filters or equivalent technology. Wastewaters that have been treated by an appropriate control but still contain trace amounts of sediment are not considered contaminated; and
10. Discharges of stormwater listed above, or authorized non-stormwater commingled with a discharge authorized by a different NPDES permit and/or a discharge that does not require NPDES permit authorization.

Part 3. WHAT THIS PERMIT OR THE RAINFALL EROSION WAIVER DOES NOT COVER

This NPDES general permit does **not** authorize or address:

1. A discharge of stormwater runoff from construction activities which violates the provisions of this NPDES general permit;

2. Construction activities on sites within Kansas which are located on Indian Country lands, (see endnote 3, page 20);
3. Construction activities which may discharge stormwater runoff one-half stream mile or less from a Critical Water Quality Management Area; an Exceptional State Water; a Special Aquatic Life Use Water; or to an Outstanding National Resource Water unless KDHE specifically grants coverage by this NPDES general permit (see endnote 4, page 20).
4. Construction activities that result in the discharge of stormwater runoff which violates the Kansas Surface Water Quality Standards;
5. Construction activities that result in the discharge of stormwater runoff which violates the applicable requirements of a Municipal Separate Storm Sewer program or local stormwater pollution prevention program;
6. Construction activities that may adversely affect threatened or endangered species as listed in K.A.R. 115-15-1 et seq. unless the KDWP&T has been specifically consulted with;
7. Construction activities that may affect any identified archeological sites or historic sites listed or eligible for listing on the National Register of Historic Places unless the KSHS has been specifically consulted with;
8. Projects that are exempt under the Oil & Gas Exemption (see definition). However, if coverage under the NPDES general permit is requested, an Authorization will be issued and permit requirements will be enforced. However, dewatering discharges (e.g., well point or groundwater dewatering wells) and trench dewatering from groundwater infiltration are not exempt activities under the Oil and Gas Exemption and require KDHE approval, permitting, or authorization under the NPDES general permit. KDHE will review discharges based on management by appropriate controls, discharge quality and quantity, and proposed location of the discharge to determine the need for approval or permitting requirements on a case-by-case basis. Acceptable discharges of uncontaminated groundwater dewatering shall meet Kansas Surface Water Quality Standards, control sediment by employing bag filters or equivalent technology, and prevent down gradient scouring and soil erosion.

9. Agricultural construction activities are generally exempt unless construction of a drainage structure will drain an area that exceeds the definition of a stream as defined by the Kansas Department of Agriculture under K.A.R. 5-45-1(t), or the construction is for a livestock pen or feature related to concentrated animal feeding operations or a structure such as a garage, barn, shed, stall, storage building, residence or office;
10. The discharge of stormwater from sites where construction activities resulting in the disturbance of one or more acres or are a part of a common plan of development or sale which may disturb a cumulative total of one or more acres where a discharge is directed to an "impaired water" where the impairment is for total suspended solids, nitrogen, or phosphorous or a waterbody for which KDHE has developed, and EPA has approved, a Total Maximum Daily Load (TMDL) for total suspended solids, nitrogen, or phosphorous. Authorization for coverage under this general permit will only be granted if the stormwater discharge will not cause or contribute to a violation of surface water quality standards and the permittee implements, operates, and maintains appropriate BMPs, erosion and sediment control measures, and complies with all provisions of this NPDES general permit. In the absence of information demonstrating otherwise, KDHE expects that compliance with the provisions, conditions, and limits in this general permit will result in stormwater discharges being controlled, as necessary, to meet applicable water quality standards and satisfy current provisions in Kansas developed and EPA approved TMDLs directed at total suspended solids and indirectly address releases associated with nitrogen and phosphorus. Per the Kansas TMDLs addressing total suspended solids, KDHE reviews of erosion and sediment control Plans, BMPs, and the SWP2 Plans will concentrate on trying to protect and maintain buffers and vegetative filter strips along and immediately adjacent to streams and lakes and to minimize construction impacts on streams. In accordance with the provisions of the TMDLs, KDHE will also concentrate on trying to identify projects operating without an NPDES permit or projects which do not employ effective erosion and sediment control techniques. KDHE may impose additional water-quality based limitations on a site-specific basis or require coverage under an NPDES individual permit if information in the NOI and associated materials, required reports, site inspections conducted by KDHE or EPA, or from other sources indicate that stormwater discharges from the site are not controlled as necessary to meet applicable water quality

- standards or the provisions of a specific TMDL for the waterbody receiving the discharge.
11. Discharges of water mixed with non-stormwater discharges, unless they are listed as allowable non-stormwater discharges in Part 2 above or are determined by KDHE as not requiring authorization;
 12. Discharges of fill or dredged materials regulated by part 401 or 404 of the Clean Water Act unless permits under 401 or 404 so stipulate;
 13. Stormwater discharges associated with construction activities that have been covered under an individual permit or a different NPDES general permit, unless authorized by KDHE Bureau of Water;
 14. Stormwater and/or allowable non-stormwater discharges associated with construction activities that are discharged to a combined sewer system; and
 15. The modification of stormwater drainage (the routing of flows or the change in quantity of flow) onto or across private property.

This NPDES general permit does not relieve the permit holder of the obligation to obtain other approvals, permits, licenses, or documents of sanction that may be required by other federal, state, or local government agencies.

This NPDES general permit also does not authorize any other discharge of sewage, pollutants or wastewater to waters of the State including for example:

- a. Hazardous substances or oil from an on-site spill or improper handling and disposal practices;
- b. Wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks;
- c. Wastewater generated from wet air pollution control equipment including asphalt plants, or the containment of asphalt plant scrubber water in lined ponds;
- d. Contaminated groundwater (see definitions);
- e. Wastewater from washout and clean out of stucco, paint, form release oils, curing compounds and other construction materials;
- f. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance;
- g. Soaps or solvents used in vehicle or equipment washing; or

- h. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, unless managed by appropriate controls.

KDHE reserves the right to deny coverage under this NPDES general permit to applicants for stormwater runoff from construction or earth disturbing activities at sites which have contaminated soils which will be disturbed by the construction activity or have contaminated groundwater which could be discharged by the construction activity.

3.1 Individual Permits Required Due to Denial or Non-Compliance -

If the NOI for coverage under this NPDES general permit is denied by KDHE, then the applicant is not eligible for coverage under this NPDES general permit and shall apply for an individual NPDES permit.

The permittee shall apply for an individual NPDES permit at least 180 days prior to commencing construction activities. Construction activities as defined in this permit shall not commence until the individual NPDES permit is issued.

Part 4. HOW TO APPLY

The owner or operator of a construction site needing to discharge stormwater runoff from construction activities shall submit a complete request for coverage under this NPDES general permit to obtain authorization and receive Authorization under this NPDES general permit from KDHE prior to removing vegetation or disturbing soil at the site.

A complete request for Authorization to discharge stormwater runoff from construction activities under this NPDES general permit must be submitted or the request will not be processed. A complete request for Authorization includes:

- An NOI form (construction stormwater) with all information provided and an original authorized signature;
- A check for the first year of the annual permit fee made payable to "KDHE". Per K.A.R. 28-16-56 et seq., as amended, the current annual permit fee for this NPDES general permit is \$60;
- An area map delineating the boundary of the construction site and the general topographic features of the area at least one mile beyond the construction site boundary and indicating the location

of all streams and other surface water bodies within one mile of the site boundary that receive runoff from the construction site;

- A summary of the sequence of major soil disturbing activities including installation of the corresponding stormwater management and pollution control features;
- A detailed site plan covering the entire scope of the project construction activities showing the existing contours, proposed contours, erosion and sediment control features, and locations where stormwater runoff leaves the construction site;
- A narrative summary of the erosion and sediment control(s) and other best management practices that will be utilized to eliminate or minimize contamination of stormwater runoff from the construction activities;
- Design calculations for any proposed sedimentation basin, if applicable; and
- Copies of letters or e-mails documenting coordination with appropriate local, state or federal agencies.

KDHE recommends the NOI and supporting documentation be submitted at least 60 days prior to start of construction activities to avoid unplanned delays in the start of construction. Submittal of a Notice of Intent (NOI) to discharge Stormwater Runoff from Construction Activities and all supporting documentation indicated above, even 60 days after submittal, does not provide automatic coverage under the NPDES general permit. Coverage under this NPDES general permit begins when KDHE authorizes the discharge of stormwater runoff from construction activities identified in the NOI and supporting documentation.

An NOI form can be downloaded from the [KDHE Stormwater Website](#) (see endnote 1, page 20) or obtained from KDHE at the address given in Part 10.2 of this NPDES general permit.

If the construction activities will be conducted within the boundaries of a Municipal Separate Storm Sewer System (MS4), the permittee shall submit a copy of the KDHE Authorization and all supporting documentation to the operator of the local MS4 and obtain any permits or approvals that may be required under the local Stormwater Management Program. A list of NPDES permitted MS4 operators which are required to develop a Stormwater Management Program is available on the [KDHE Stormwater Website](#) (endnote 2, page 20) or upon written request to KDHE Bureau of Water - Municipal Programs Section.

Upon KDHE's Authorization to discharge stormwater runoff from construction activities for the site indicated on the NOI and supporting documents, the owner or operator and, if appropriate, the company, corporation, partnership, or government entity they represent becomes the permittee under this NPDES general permit.

Part 5. STARTING CONSTRUCTION ACTIVITY

The owner or operator who has applied for coverage under this NPDES general permit shall not initiate construction activities and discharge or have the potential to discharge stormwater runoff from construction activities described in the NOI until receiving Authorization from KDHE for the discharge.

When the owner or operator receives KDHE's Authorization to discharge stormwater from construction activities, the owner or operator may commence construction activities at the site described in the NOI and supporting documentation under the provisions of this NPDES general permit and in accordance with the construction site stormwater pollution prevention Plan (SWP2 Plan).

A copy of the KDHE Authorized NOI and the project specific SWP2 Plan including the erosion and sediment control plan for the specific project shall be readily available at the construction site.

Part 6. CONTINUING COVERAGE - ANNUAL PERMIT FEE AND RENEWAL REQUIREMENTS

The permit holder shall pay an annual permit fee as specified in K.A.R. 28-16-56 et seq. as amended as long as stormwater discharges from the facility continue to meet the definition of stormwater discharges from construction activities. Make the check payable to "KDHE".

An annual invoice for the annual fee will be sent to the designated billing contact listed in the NOI. Payment of the annual permit fee is required to maintain continued coverage under this NPDES general permit until such time as a request for a transfer of ownership is received and accepted by KDHE or until the site is stabilized and a Notice of Termination (NOT) is received by KDHE or the permit is revoked/terminated.

KDHE reserves the right to revoke/terminate coverage under this NPDES general permit to applicants for stormwater runoff from construction or soil disturbing activities where annual payment for continuing coverage has not been received or reasonable application of best management practices or pollution controls have not been

implemented or maintained following notification by KDHE staff.

Authorization under this general permit will be placed on inactive status by KDHE without further notice for any of the following reasons:

- a) Failure to pay the annual permit fee after the mailing of the annual invoice and with no payment received for 3 months after the date of the invoice;
- b) Failure to provide KDHE with a valid current mailing address which results in an invoice or other KDHE correspondence being returned by the post office without a forwarding address.

Projects that have been inactivated will no longer have permit coverage under this general permit.

Projects for which a Notice of Intent has been submitted but not Authorized and for which a response to a KDHE request for additional documentation has not been received within one year of NOI submittal will be administratively closed.

Owners or operators of projects that have been placed on Inactive Status, administratively closed or denied Authorization and who want to obtain coverage under this general permit must submit a complete new request for Authorization in accordance with Part 4 of this permit.

6.1 Continuing Coverage Authorization under Previous Permit –

The permittee is not required to submit a new NOI for continuing coverage under the successor NPDES general permit unless modifications, changes or discoveries are made which may affect coverage under the successor NPDES general permit or the information in the current NOI is inaccurate, needs to be updated, or KDHE requests the submission of a new NOI.

Owners or operators of constructions activities that received KDHE authorization for coverage under the previous Kansas Water Pollution Control and National Pollutant Discharge Elimination System General Permit (General Permit No. S-MCST-0312-1) prior to the effective date of this permit may continue to operate under those permit provisions, conditions, requirements, limits, site specific authorized Best Management Practices (BMPs), and site specific authorized Stormwater Pollution Prevention Plan (SWP2 Plan) for a period of 18 months after issuance of this permit. If by 18 months after the effective date of this permit all construction activities authorized by General Permit No. S-MCST-0312-1 have not been completed, the construction site stabilized, a

Notice of Termination (NOT) completed and submitted in conformance with the permit requirements and the Notice of Termination received by KDHE, then prior to the end of this 18-month period the permittee shall modify or amend the current SWP2 Plan in conformance with all permit provisions, conditions, requirements, and limits as established in this permit. The permittee shall also implement the modified or amended SWP2 Plan prior to the end of this 18-month period and shall install, modify and continue maintaining all BMPs as specified in the modified or amended SWP2 Plan. The intent of this 18-month transition period is to enable permittees that received authorization for construction activities under the previous general permit (S-MCST-0312-1) time to either complete construction activities and terminate permit coverage or retain the services of a licensed professional engineer, geologist, architect, landscape architect, or a Certified Professional in Erosion and Sediment Control (per Part 7.1 of this permit) to modify the SWP2 Plan and implement revised BMPs in conformance with all provisions, conditions, requirements, and limits of this permit, which includes EPA's Construction and Development Effluent Guideline Standards (40 CFR 450) in effect at the time this permit was issued.

6.2 Request for an Individual NPDES Permit –

On and after the effective date of this NPDES general permit, the permit holder must comply with the terms and conditions of this permit and continue paying the annual permit fee; or request an individual NPDES permit within 90 days after the publication of this permit. The facility will continue coverage under the previous NPDES general stormwater permit (General Permit No. S-MCST-0312-1) and comply with the provisions of the previous NPDES general permit until the individual NPDES permit is issued. If coverage under an individual permit is denied the owner or operator may continue to operate under General Permit S-MCST-0312-1 for 18 months after denial of the application for an individual permit and shall modify or amend the SWP2 Plan, implement the modified or amended SWP2 Plan and install appropriate BMPs in conformance with this permit within 18 months after said denial.

6.3 Continuing Coverage Authorization after Permit Expiration –

This NPDES general permit will expire five (5) years from issuance. Should KDHE fail to issue a new NPDES general permit with an effective date on or before the expiration date of this permit, the conditions of this NPDES general permit continue in force until the effective date of a new NPDES general permit.

If the permittee wishes to continue construction activities regulated by this NPDES general permit after the expiration date of this permit, the permittee must continue

to pay the annual fee, and continue to comply with the terms and conditions of this NPDES general permit until the effective date of the successor NPDES general permit.

A permittee who has a valid authorization to discharge stormwater runoff from construction activities under the conditions of this NPDES general permit will continue to be covered until the effective date of the new NPDES general permit and shall comply with the conditions of this NPDES general permit until the effective date of the successor NPDES general permit. Upon the effective date of the successor NPDES general permit, the permittee shall continue to comply with the terms and conditions of the successor NPDES general permit or obtain coverage for construction stormwater discharges under alternative provisions of this permit.

Part 7. STORMWATER POLLUTION PREVENTION PLAN REQUIREMENTS AND GUIDELINES

Before initiating construction activities the permittee shall develop a Stormwater Pollution Prevention Plan (SWP2 Plan) which is specific to the construction activities which are to be employed at the site authorized by this NPDES general permit to discharge stormwater runoff. The permittee shall fully implement the provisions of the SWP2 Plan required under this part as a condition of this NPDES general permit throughout the term of the construction project.

The purpose of the SWP2 Plan is to ensure the design, implementation, management, and maintenance of "Best Management Practices" (BMPs) in order to eliminate or minimize erosion, sediment; and other pollutants in stormwater runoff from construction activities; comply with the Kansas Surface Water Quality Standards; and ensure compliance with the terms and conditions of this NPDES general permit.

The permittee shall select, install, utilize, operate, and maintain effective BMPs in accordance with best professional judgment, generally accepted and scientifically defensible guidance, and the concepts and methods described in Environmental Protection Agency (EPA) document number EPA 832-R-92-005, entitled *Stormwater Management for Construction Activities - Developing Pollution Prevention Plans and Best Management Practices*, published in September, 1992 and EPA document number EPA 833-R-06-004 entitled *Developing your Stormwater Pollution Prevention Plan, A Guide for Construction Sites* published in May, 2007 (see endnote 5, page 20). The permittee is not limited to the BMPs provided in the EPA guidance manuals. Other pollution or erosion controls must utilize practices with similar effectiveness, and the permittee should develop

BMPs with the goal of site specific effectiveness in mind.

7.1 General SWP2 Plan Requirements -

Stormwater Pollution Prevention (SWP2) Plans shall be developed and prepared under the supervision of a licensed Kansas professional engineer, geologist, architect, or landscape architect or a Certified Professional in Erosion and Sediment Control (see endnote 6, page 20). Please note: It is unlawful for a person to perform any assignment involving a specific technical profession unless licensed or specifically exempted by the Kansas Board of Technical Professions, and is qualified by education and expertise in that profession to perform such work.

The permittee shall ensure the BMPs and/or pollution controls are properly installed and maintained at the locations and relative timeframes specified in the SWP2 Plan. Margin or border BMPs, such as a buffer area or vegetation strips, to control stormwater runoff where it leaves the site boundary, shall be installed or marked for preservation before general site clearing is started. Stormwater runoff from disturbed areas which leave the site shall pass through an appropriate sediment control, such as a sedimentation basin, sediment trap, or silt fence prior to leaving the construction site.

7.2 Contents of SWP2 Plan

7.2.1 Site Description –

The permittee's SWP2 Plan shall include all of the information provided in the NOI. The SWP2 Plan shall expand upon the NOI information in order to make the SWP2 Plan a working document which contractors and site construction workers can use to guide the installation and maintenance of BMPs and pollution controls.

7.2.2 Description of Best Management Practices - The permittee's SWP2 Plan shall include a description of the BMPs and/or pollution controls they will use at the site. The SWP2 Plan shall provide the following general information for each BMP and/or pollution control which will be used one or more times at the site:

- a physical description of the BMP and/or pollution control;
- the site and physical conditions which must be met for effective use of the BMP and/or pollution control;
- the BMP and/or pollution control installation/construction procedures, including typical drawings; and
- operation and maintenance procedures for the BMP and/or pollution control.

The SWP2 Plan shall provide the following information for each specific instance where a BMP and/or pollution control is to be installed:

- where, in relation to other site features, the BMP and/or pollution control is to be located;
- when, in relation to each phase of construction, the BMP and/or pollution control will be installed; and
- what site conditions must be met before removal of the BMP and/or pollution control, if it is not permanent.

7.2.3 Detailed SWP2 Plan Requirements -

The SWP2 Plan must provide BMPs and/or pollution controls that, at a minimum, are designed, installed, and maintained to:

- (1) Control stormwater volume and velocity within the site to minimize soil erosion in order to minimize pollutant discharges.
- (2) Control stormwater discharges, including both peak flow rates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points;
- (3) Minimize the amount of soil exposed during construction activity;
- (4) Minimize the disturbance of steep slopes (slopes of forty (40) percent or greater, see definitions);
- (5) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
- (6) Provide and maintain natural buffers around waters of the United States, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible;
- (7) Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;
- (8) Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed;

(9) Minimize discharges from stream crossings by immediately stabilizing the areas from bank to bank and providing appropriate controls to minimize any stream scour and providing down gradient sediment control from bore pit stockpiles;

(10) Control discharges from sediment or soil stockpiles;

(11) Minimize the generation of dust through the application of water or other dust suppression techniques;

(12) Minimize off-site tracking of soils by utilizing wheel washing facilities or an appropriately designed construction entrance and exit. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge. Off-site track out shall be cleaned up at the end of each work day. Sites with contaminated soils must provide wheel washing and tanks for holding of the wash water, if feasible, or other equivalent practices if the vehicles can track the contaminated soil from the site;

(13) Provide structures to divert significant flows of stormwater from off-site drainage, if feasible;

(14) Reduce erosion of concentrated flows of stormwater in channelized drainage through the use of velocity dissipation devices, (e.g., check dams, riprap, and wattles), installation of channel liners (e.g., riprap, geotextiles, and erosion control blankets), or the combined use of both methods of erosion control; and

(15) Provide storm drain inlet protection (such as rock bags) for inlets down gradient of disturbed project areas that are not fully stabilized or where construction activity will soon be started.

7.2.4 Steep Slope Stabilization Requirements -

When construction activities on steep slopes (slopes of forty (40) percent or greater, see definitions) cannot be avoided, the SWPP Plan must require the contractor to immediately initiate placement of appropriate erosion control BMPs in any exposed steep slope areas where construction activities have permanently or temporarily ceased, and will not resume for a period exceeding 7 calendar days. For vegetative cover areas, in addition to seeding, watering, mulching, and any other required activities related to the planting and establishment of vegetation, other appropriate erosion control practices such as geotextiles or erosion control mats shall be utilized. Diversion of concentrated or channelized stormwater flows around steep slopes or slope drains shall be utilized where feasible.

7.2.5 Temporary and Permanent Non-Structural BMPs

Examples of non-structural BMPs which the permittee should consider specifying in the SWP2 Plan include: temporary seeding, final seeding, mulching, geotextiles, sod stabilization, protection of existing vegetation for use as buffer strips (especially along drainage courses), protection of trees, preserving existing stream channels as overflow areas when channel shortening is allowed, soil stabilizing emulsions and tackifiers, mulch tackifiers, preservation of mature vegetation, stabilized site entrances/exits, wheel brushing or washing, clean-up of soils on roadways, dust control and other appropriate BMPs.

The permittee's SWP2 Plan shall require existing vegetation to be preserved where practical, and the time period for soil areas to be without vegetative cover is to be minimized to the extent practical.

Clearing and grubbing within 50 feet of a defined drainage course shall be avoided, if feasible.

Where changes to defined drainage courses are to occur as part of the project, clearing and grubbing within 50 feet of the defined drainage course shall be delayed until all materials and equipment necessary to complete the drainage change are on site.

Changes to defined drainage courses shall be completed as quickly as possible once the work has been initiated. The area impacted by the construction of the drainage course change is to be re-vegetated or stabilized to minimize the length of time the area is exposed.

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other soil disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. The disturbed areas shall be protected from erosion by stabilizing the area with mulch or other similarly effective soil stabilizing BMPs. Initial stabilization activities must be completed within 14 days after soil disturbing activities cease.

Stabilization of disturbed areas is not required if the intended function of a specific area of the site necessitates that it remain disturbed. Such areas include stockpiles of soil materials (such as structural soils and clays, but not stockpiles of topsoil) that are intended for a use that prohibits introduction of vegetation, mulch or other foreign materials into the soil, areas reserved for landscaping, including areas prepared for final sod application, that prohibits the introduction of vegetation, mulch or other foreign materials prior to placement of final landscaping features, dirt tracks, courts and other amenities designed or otherwise intended to remain unstabilized, and disturbed floors and banks below the

anticipated pool elevation of ponds and basins. Appropriate sediment control measures shall be provided below all such areas where the intended function necessitates that the area remain disturbed.

Disturbed areas that exhibit ice, frozen soil conditions, or have a consistent snow cover extending across 70 percent or more of the area are considered to be temporarily stabilized until thawing occurs across the affected area. Stabilization of such iced, frozen or snow covered areas must be completed within 14 days following the first subsequent inspection required under Part 7.2.10 of this permit that finds the affected area thawed and no longer stabilized due to ice, frozen soil conditions or snow cover.

7.2.6 Temporary and Permanent Structural BMPs -

Examples of structural BMPs which the permittee should consider specifying in the SWP2 Plan include: diverting flows from undisturbed areas away from disturbed areas, silt (filter fabric or straw bale) fences, earthen diversion dikes, drainage swales, sediment traps, rock check dams, subsurface drains (to gather or transport water for surface discharge elsewhere), pipe slope drains (to carry concentrated flow down a slope face), level spreaders (to distribute concentrated flow into sheet flow), storm drain inlet protection and outlet protection, reinforced soil retaining systems, gabions, temporary or permanent sediment basins, and other appropriate BMPs.

7.2.7 Sedimentation Basins -

The permittee's SWP2 Plan shall require a sedimentation basin, where feasible, for each drainage area with 10 or more acres disturbed at one time.

The sediment basin needs to be designed and maintained to provide at least 3,600 cubic feet of storage per acre drained. Where use of a sediment basin of this size is impractical, the SWP2 Plan shall evaluate and specify other similarly effective BMPs to be employed to minimize erosion and control sediment. Where large areas of undisturbed or stabilized areas can drain into the sediment basin or in certain areas of Western Kansas, alternative design detention volumes can be used. See the definition of Sediment Basin Design Criteria for additional clarification and alternatives for sizing and volume requirements.

Outlet structures must be designed and constructed to withdraw water from the surface, unless infeasible. If infeasible, the reason it is infeasible shall be provided as a part of the NOI and SWPP Plan submittal to KDHE.

The permittee's SWP2 Plan shall require that the sediment basin be cleaned to ensure adequate detention is available. No more than 20 percent of the required

sediment basin capacity shall be taken up with sediment. The basin shall be maintained until less than 10 acres of area needing final stabilization within the drainage basin remains. If a sedimentation basin is removed, other appropriate and effective BMP's and/or pollution controls shall be provided, as needed.

The 3,600 cubic feet of storage area per acre drained criteria does not apply to flows from areas where such flows are diverted around both the disturbed area and the sediment basin.

The permittee's SWP2 Plan shall require both temporary and permanent sedimentation basins to have a stabilized emergency spillway to minimize the potential for erosion of the emergency spillway or sediment basin embankment.

7.2.8 Permanent Stormwater Controls -

If applicable, the permittee's SWP2 Plan shall include a description of the measures that will be installed during construction to control pollutants in stormwater runoff that will occur after construction activities have been completed. These would include drainage channels or systems; outlet control devices, detention basins, oil water separators, catch basins, etc. This NPDES general permit does not require the permittee or his contractors to operate or maintain these measures beyond the date of the Notice of Termination unless otherwise notified by KDHE.

7.2.9 Additional Site Management BMPs -

The permittee's SWP2 Plan shall address other BMPs, as required by site activities, to minimize or eliminate contamination of stormwater runoff. At a minimum, such measures must be designed, installed, implemented and maintained to:

- (1) Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be free of detergents, soaps, or solvents and must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- (2) Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater except where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use);

(3) Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures;

(4) Require the contractor to provide solid and hazardous waste management including: providing trash containers and regular site clean-up for proper disposal of solid waste such as scrap building material, product/material shipping waste, food containers, and cups; and providing containers and proper disposal for waste paints, solvents, and cleaning compounds;

(5) Require portable toilets for proper disposal of sanitary sewage;

(6) Require storing construction materials away from drainage courses and low areas;

(7) Require containment berms and drip pans at fuel and liquid storage tanks and containers;

(8) Provide procedures to eliminate or minimize the potential to discharge environmental contaminants from contaminated soil or groundwater; and

(9) Provide procedures and practices to eliminate the potential to discharge wash and/or rinse waters from concrete mixing equipment including ready mix concrete trucks.

7.2.10 Site Inspections by Permittee –

The permittee shall ensure the entire construction site including but not limited to disturbed areas, BMPs, waste and construction storage areas, drainage areas, locations where stormwater can flow from the construction site, and temporarily stabilized areas is inspected on a regular schedule and, with the exception of Saturdays, Sundays, established Federal Holidays and the day after Thanksgiving, by the end of the next day following a rain event which results in a rainfall total of 0.5 inches or greater.

Rainfall totals used to establish when a construction site inspection is required shall be determined from local weather station reports of daily rainfall totals such as the 1200 GMT end-of-day totals available through the National Weather Service and their cooperative observers or from regularly scheduled on-site rain gauge monitoring performed and recorded each work day by project personnel. A site inspection is required whenever a rainfall total of 0.5 inches or greater is observed based a single monitoring event; or based on the cumulative total of two consecutive monitoring events when the rainfall total of the first monitoring event is less than 0.5 inches.

The permittee shall, upon initiation of construction activities, determine an initial routine inspection monitoring period based on the start date of construction activities and a routine monitoring frequency of either 14 days or a different monitoring frequency established in the SWP2 Plan that does not exceed 14 days. Subsequent routine inspection monitoring periods shall be established based on the chosen routine monitoring frequency and the initial inspection monitoring period determined at the start of construction, without regard to the dates of routine or rain event inspections that are conducted. At a minimum, a single routine or rain event site inspection shall be conducted within each routine inspection monitoring period.

For disturbed areas that have not been finally stabilized all installed BMPs and other pollution control measures shall be inspected for proper installation, operation and maintenance. Locations where stormwater runoff leaves the site shall be inspected for evidence of erosion or sediment deposition. Once a portion of the project area meets the final stabilization criteria specified in Part 9 of this permit, then no further inspection of that final stabilized portion is required provided that the area is identified in the SWP2 Plan as having obtained final stabilization; however, the permittee shall remain responsible to correct any conditions within such areas that are identified as contributing to the discharge of sediment or other pollutants from the project site.

A report of each regularly scheduled inspection and required rain event inspection shall be documented. The inspection report is to include the following minimum information: inspector's name, date of inspection, observations relative to the effectiveness of the BMPs, actions taken or necessary to correct deficiencies, listing of areas where construction operations have permanently or temporarily stopped, and observations of stormwater discharge locations with respect to the effectiveness of the upgradient BMPs. The inspection report shall be completed within 24 hours of the inspection excluding Saturdays, Sundays and previously specified holidays and shall be signed by the person performing the inspection.

Any deficiencies in the operation or maintenance, effectiveness, adequacy or coverage extent of all installed BMPs, temporary stabilization measures and other pollution control measures identified during the inspection shall be noted in the inspection report and corrected within seven calendar days of the inspection unless infeasible. The permittee shall promptly notify the site contractors responsible for operation and maintenance of BMPs of deficiencies. When correction of any noted deficiency within seven calendar days is infeasible, the inspection report shall document the reason why such

correction is infeasible and provide a specific timeframe for completing all needed maintenance and repairs of installed control measures and installation or modification of all control measures and management practices identified as missing, ineffective or inadequate as soon as feasible.

If weather or site conditions render access to any portion of the site to be unsafe or infeasible for inspection activities, the inspection report shall document the reason why access is unsafe or infeasible. Weather and site conditions shall then be monitored and recorded daily excluding Saturdays, Sundays and referenced holidays until access for inspection activities is determined to be safe and feasible. Inspection of the affected area shall then be performed by the end of the next day after determining that access is safe and feasible, again excluding Saturdays, Sundays and referenced holidays.

Disturbed project areas that are temporarily stabilized due to ice, frozen soil conditions or consistent snow cover extending across 70 percent or more of the area shall be noted on the inspection report. For such areas, the observation of disturbed soils, sediment and erosion control BMPs, drainage areas and locations where stormwater can flow from the construction site is not required during site inspections while one or more of the listed conditions are present. The thawing of these areas shall be noted during the first subsequent inspection when iced, frozen or snow covered conditions are no longer present.

For inactive project sites where soil disturbing construction activities have permanently ceased and final stabilization activities have been completed and documented as such in the SWP2 Plan but vegetative density does not meet the final stabilization criteria specified in Part 9 of this permit, inspections in response to rain events are not required; however, at a minimum, a single routine inspection shall still be conducted at the inactive project site within each established routine inspection monitoring period.

The permittee shall maintain the site inspection reports on-site or at the records storage location identified in the NOI. The permittee shall provide a copy of the site inspection reports to KDHE or EPA upon request.

7.3 Modifications and Amendments to SWP2 Plan -

The permittee shall modify or amend the SWP2 Plan as appropriate during the term of the construction activity until the site is stabilized. The permittee, an authorized representative, and/or the contractor(s) responsible for installation, operation, and maintenance of the BMPs shall keep a current copy of the SWP2 Plan on the project site.

7.3.1 Modification of Control Measures and Management Practices –

Modifications to the SWP2 Plan shall be made to better control the site erosion and sediment discharges based on field conditions or site phasing that was not considered during SWP2 Plan development. The permittee shall indicate the changes on the erosion and sediment control plan sheets, maintain a log showing dates of all SWP2 Plan modifications, a brief description of the SWP2 Plan modifications, and the name and title of the person authorizing the modification. Changes to the SWP2 Plan that are not an amendment (see below) are considered modifications and do not need to be submitted to KDHE. Modification of site erosion and sediment controls based on field conditions or site phasing do not require preparation or approval by a professional; however, modifications that involve the relocation or reconfiguration of any sedimentation basin or corresponding outlet structure required under Part 7.2.7 of this permit shall be prepared under the supervision of a licensed or certified professional as specified in Part 7.1 of this permit.

7.3.2 Amendment of the SWP2 Plan –

The SWP2 Plan shall be amended:

- when a change in the project scope increases the amount of soil disturbed by more than 1.0 acre;
- when stormwater will discharge into a surface water not originally receiving stormwater from the permitted site construction activities; and
- when determined as significant by KDHE upon notification of any discovery of contaminated soil or groundwater, potential historic or archeological sites, or threatened or endangered species during the construction that was not identified and addressed in the SWP2 Plan.

For projects requiring an amendment the permittee will need to submit a letter explaining the changes, a modified erosion and sediment control plan, and a new NOI form indicating the new acreage with the originally issued State and Federal permit numbers. Soil disturbing activities shall not occur on the added or discovered areas until Authorization from KDHE is provided. Amendments need to be submitted at least 60 days prior to implementing the proposed changes at the site. Authorization for the revised project will be indicated in similar fashion as the initially authorized NOI and a copy of the newly authorized NOI will be provided to the permittee. Amendments to SWP2 Plans shall be prepared under the supervision of a Licensed Kansas professional engineer, geologist, architect, or landscape architect or a Certified Professional in Erosion and Sediment Control.

The permittee shall modify or amend the SWP2 Plan, at a minimum, whenever:

- there is a change in design, operation, or maintenance of BMPs, pollution controls, or pollution prevention measures;
- there is a change in the design or scope of the construction project which could significantly affect the quality of the stormwater runoff or the use of designated BMPs or pollution controls;
- the construction site inspections indicate deficiencies in the SWP2 Plan or any BMP;
- KDHE or EPA notifies the permittee of deficiencies in the SWP2 Plan, BMP's, and/or pollution controls;
- the SWP2 Plan is determined to be ineffective in significantly minimizing or controlling erosion and sedimentation (e.g. there is evidence, such as excessive site erosion, excessive sediment leaving the site, or excessive sediment deposits in drainage channels, streams, or lakes);
- KDHE determines violations of Surface Water Quality Standards may occur or have occurred; or
- KDHE determines the activities at the site constitute a significant pollution potential which the current SWP2 Plan does not adequately address.

The permittee shall provide a copy of the most current SWP2 Plan to KDHE or EPA upon request.

7.4 Contractor Notification -

The permittee shall notify each contractor or entity (including utility crews, and city employees or their agents) that will perform work at the site of the existence of the SWP2 Plan and what action or precautions shall be taken while on-site to minimize the potential for erosion and the potential for damaging any BMP or pollution control. However, the permittee is ultimately responsible for ensuring compliance with this permit.

The permittee shall provide contractors who are responsible for installation, operation, or maintenance of any BMP a copy of or access to the SWP2 Plan.

Part 8. TRANSFER OF OWNERSHIP

8.1 Transfer of Entire Permitted Area -

Coverage under and the requirements of this NPDES general permit are transferable but transfer is not automatic and must be accepted by KDHE. The permit

may be transferred only to a party that meets the definition of "Owner", "Owner or operator", or "owner/operator" for the entire authorized project scope. The current permittee and the new permittee shall complete a Notice of Transfer of Owner/Operator (NOTO) form, bearing original signatures, and submit to KDHE at the address given in Part 10.2 of this NPDES general permit. If the original permittee is unavailable or unwilling to sign the NOTO (normally due to bankruptcy) the NOTO shall be filled out as much as possible and a cover letter explaining the situation submitted with the NOTO by the new owner.

Transfers shall be requested at least two weeks in advance of transfer of ownership or operational control to ensure KDHE has accepted the transfer and/or provisions that needed to be addressed by the two parties covering continued responsibility by the original permittee until such time as KDHE formally accepts the permit transfer.

8.2 Partial Permitted Area Transfer of One (1.0) or More Acres -

If ownership or operational control of a contiguous area, one (1.0) or more acres in size, within the overall project or subdivision area is sold or otherwise transferred by the permittee to a new owner, then a new complete request for Authorization for the area being sold or otherwise transferred shall be submitted in accordance with Part 4 of this NPDES general permit. This procedure is required for all projects including residential, commercial and industrial subdivisions. Lots for construction of residential homes of greater than one (1.0) acre can utilize procedures under this section or under Part 8.3. Previous clearances issued for the original permitted project area (e.g., Kansas Historical Society, Kansas Department of Wildlife, Parks and Tourism, United States Army Corps of Engineers) may be referenced.

8.3 Partial Permitted Area Transfer of Less than One (1.0) Acre or a Residential Home Lot -

Both the permittee and the new owner or operator including a contractor, who obtains ownership of a lot or contiguous portion of an overall permitted area that is less than one (1.0) acre in size shall jointly complete an Individual Lot Certification (ILC) form for each lot, lots or portions sold or otherwise transferred, or shall incorporate requirements into the contract for sale that are equivalent to those specified on the ILC form. The ILC or equivalent statements in the contract for sale do not constitute a transfer of the Authorization to discharge. The agreement is between the new owner or operator of the lot or portion and the permittee to implement the SWP2 Plan and the conditions of the general NPDES permit cooperatively, however, the original permittee maintains responsibility for discharges from the project site.

The permittee shall maintain the ILC form or a copy of the

contract for sale covering the same requirements either on-site or at the Records Address location identified in Section I of the NOI. The permittee shall provide ILC forms or copies of contracts for sale to KDHE, EPA, or any other government agency upon request.

Part 9. PROJECT COMPLETION

The permittee shall notify KDHE of the project completion by submitting a Notice of Termination (NOT). The permittee shall sign the NOT and mail it to KDHE at the address given in Part 10.2 of this NPDES general permit.

When the soil disturbing activities are complete and final stabilization of all disturbed areas has been achieved, the permittee can terminate coverage under this NPDES general permit by submitting the NOT. The project is considered to be stabilized when perennial vegetation, pavement, buildings, or structures using man-made materials cover all areas which have been disturbed. Vegetation must have a density of at least 70 percent of the density of undisturbed areas at or near the site.

For projects disturbing agricultural land, disturbed areas that are restored to their preconstruction agricultural use are not subject to the above stabilization criteria. Areas that are not being returned to preconstruction agricultural use, must meet the conditions for final stabilization in this Part.

For subdivision development projects, termination of coverage may be requested after three years, provided the entire subdivision is stabilized and the rate of home construction disturbs less than one (1.0) acre per year (approximately 5 lots) or less than one (1.0) acre of land remains to be developed (approximately 5 lots).

The permittee may also terminate coverage under this NPDES general permit prior to completion of the project construction activities provided that duplicate authorization for coverage under this general permit or KDHE authorized successor permits has been issued and is in effect for all remaining construction activities including all areas disturbed by previous construction activities that have not obtained final stabilization.

Part 10. GENERAL REQUIREMENTS OF THIS PERMIT

10.1 Records -

The permittee shall maintain all records required by this NPDES general permit for a period of three (3) years following the date on the NOT. All records shall be kept on-site or in a readily available location identified in the NOI until final stabilization has been completed. Electronic versions of the required records are acceptable but must show or otherwise document all relevant

signatures and be readily available for copying and contractor access as per Part 7.4 and agency review as per Part 10.4 of this general permit. After final stabilization has been completed, records may be maintained at the permittee's main office.

Records shall be readily available during normal business hours.

Records which shall be maintained by the permittee include, but are not limited to:

- the NOI indicating the Authorization by KDHE to discharge stormwater runoff from the construction activities and supporting documentation used to apply for authorization under this NPDES general permit;
- the SWP2 Plan for the construction site named in the Authorization to discharge stormwater runoff, and any amendments to the SWP2 Plan;
- all site inspection records;
- any clearance letters, from KDWP&T, KSHS, COE, or any other agency providing clearance;
- Individual Lot Certification (ILC) forms or portions of the contract for land sale with equivalent wording; and
- a copy of the Notice of Termination submitted to KDHE.

Except for data determined to be confidential *under 33 USC Section 1318*, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential. Knowingly making any false statement on any such report or tampering with equipment to falsify data may result in the imposition of criminal penalties as provided for in 33 USC Section 1319 and KSA 65-170c.

10.2 Contact Address -

All notifications, forms, reports, or other correspondence which must be submitted to KDHE as required by this NPDES general permit shall be sent to:

Kansas Department of Health and Environment
Bureau of Water, Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, KS 66612 – 1367

Applicants can download copies of all forms, references, or the NPDES general permit from the [KDHE Stormwater](#)

Website at:

<http://www.kdheks.gov/stormwater/index.html>

or can be requested by e-mail to KDHE at:

kdhe.stormwater@ks.gov

10.3 Duty to Comply -

The permittee shall comply with all conditions of this NPDES general permit. Any noncompliance with this NPDES general permit constitutes a violation of the CWA, K.S.A. 65-164 and 65-165, and/or K.A.R. 28-16-28 et seq. Noncompliance may result in enforcement action; revocation/termination of this authorization; or amendment of this authorization.

It shall not be a defense for a permittee in an enforcement action to contend that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of the NPDES general permit.

After implementation of the stormwater pollution prevention plan, if stormwater discharges adversely affect water quality, or cause violations of any other provision of this NPDES general permit, the permittee shall modify and implement the stormwater pollution prevention plan to address the non-compliance.

Failure to comply with the requirements of the NPDES general permit may subject the permittee to enforcement actions including revocation/termination of the authorization to discharge under this NPDES general permit, a requirement to discontinue the permitted activity, fines and/or possible imprisonment.

Projects which have received authorization under this Permit that are placed on Inactive Status will no longer have permit coverage under this Permit. KDHE will place previously permitted facilities on Inactive Status for failure to pay the annual permit fee without further notice if payment is not received within 3 months of the date of the invoice (see Part 6).

10.4 Duty to Provide Information and Site Access -

The permittee shall furnish to KDHE; the EPA; or any local agency having jurisdiction for any aspect of the project, any information which is requested to determine compliance with this NPDES general permit.

When the permittee becomes aware they failed to submit any relevant facts or submitted incorrect information to KDHE, they shall promptly submit such facts or information to KDHE at the address given in Part 10.2.

The permittee shall allow the Director or an authorized representative of KDHE, the EPA, or, local agency having jurisdiction over the project, upon the presentation of proper credentials and other documents as may be required by law, to:

- enter upon the site where a regulated construction project or activity is located or conducted or where records must be kept under the conditions of this NPDES general permit;
- obtain samples of any discharge to waters of the State;
- have access to and copy at reasonable times, any records which must be kept under the conditions of this NPDES general permit; and
- inspect the construction site and any facilities or equipment (including monitoring equipment, stormwater controls, and BMPs).

10.5 Signatory Requirements -

The Notice of Intent (NOI), the Notice of Termination (NOT), and the Notice of Transfer of Owner/Operator (NOTO) shall be signed by the owner, operator, or designee. All forms, reports, or other correspondence which must be submitted to KDHE as required by this NPDES general permit shall be signed by the permittee or a duly authorized representative.

10.6 Chemical and Sewage Spills -

In case of a spill emergency call:

U.S. EPA National Response Center:

(24 hours a day) (800) 424-8802

Kansas Division of Emergency Management: (KDEM)

(24 hours a day) (785) 291-3333

Website: www.ksready.gov

KDHE Spill Report Hotline:

(24 hours a day) (785) 296-1679

10.7 Hazardous Substance and Oil Spill Reporting -

The permittee or authorized representative is required to notify the U.S. EPA National Response Center (800-424-8802) in accordance with the requirements of 40 CFR 117 and 40 CFR 302 as soon as the discharge of any hazardous substance or oil in excess of the reportable quantity has been discovered. A reportable quantity of oil is the quantity which causes a "film or sheen upon or discoloration of the surface of the water or adjoining shorelines or causes a sludge or emulsion to be deposited

beneath the surface of the water or upon adjoining shorelines." Reportable quantities for hazardous substances are listed in the cited CFRs.

The permittee is also required to notify the Local Emergency Planning Agency and the [Kansas Division of Emergency Management](#) (KDEM) at the phone numbers and/or website listed above in permit paragraph 10.6.

Nothing in this permit shall be construed to preclude the initiation of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject to under 33 USC Section 1321 or KSA 65-164 et seq.

10.8 Sewage, Wastes, Materials, and Substances Spill Reporting -

Any discharge or escape of sewage, substances, materials, or wastes, as set forth in K.S.A. 65-171d, which are, or threaten to contaminate or alter any of the properties of the waters of the State or pollute soil in a detrimental, harmful, or injurious manner or create a nuisance, shall immediately be reported to the Kansas Department of Health and Environment at (785) 296-1679. The report shall be made by the permittee, or the owner of the spilled materials, or their respective authorized representative.

In the case of discharges under conditions other than those allowed in a valid NPDES permit, the report shall be made by the permittee or an authorized representative. The report shall be made by telephone to [KDHE](#) at 785-296-1679 in accordance with K.A.R. 28-48-1 et seq.

Nothing in this NPDES general permit shall be construed to preclude KDHE's institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under the CWA (33 U.S.C. Section 1321); the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); K.S.A. 65-161 et seq.; or under state or federal statutes or regulations governing oil or hazardous substances or wastes.

10.9 Requiring a Different NPDES Permit -

The Director may require the permittee to apply for and obtain an individual permit or different general permit if:

- the permittee is not in compliance with the conditions of this NPDES general permit;
- the discharge no longer qualifies for this NPDES general permit due to changed site conditions or regulations; or
- information becomes available which indicates water

quality standards have been, or may be violated.

The permittee will be notified in writing of the need to apply for an individual permit or a different NPDES general permit. When an individual permit or different general permit is issued to the authorized permittee, this NPDES general permit is automatically revoked/terminated upon the effective date of the individual or different general permit, whichever the case may be.

10.10 Electronic Data Monitoring Report -

EPA has promulgated a final rule requiring regulated entities to report discharge monitoring report (DMR) data electronically by December 21, 2016. Also, K.A.R. 28-16-63 requires permittees to report NPDES data in a form required by KDHE. KDHE has developed electronic reporting tools to assist permittees in complying with the EPA electronic reporting rule and K.A.R. 28-16-63. Unless a waiver has been approved by KDHE, permittees are required to submit reports electronically when these tools are made available to them by KDHE. By December 21, 2020, the permittee must submit electronically compliance data, reports, and permit applications by a KDHE approved electronic reporting tool.

Part 11. STANDARD CONDITIONS

In addition to the conditions specified in this NPDES general permit, the permittee shall comply with the following Standard Conditions.

11.1 Proper Operation and Maintenance -

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the requirements of this NPDES general permit, Kansas law, and Federal law. Proper operation and maintenance also includes adequate laboratory controls, if applicable, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the requirements of this permit. Pollution control systems, erosion control measures or best management practices which require maintenance shall be maintained, repaired or replaced in a timely manner to avoid discharging stormwater runoff laden with pollutants or sediment which adversely impacts water quality.

The permittee shall take all necessary steps to minimize or prevent any adverse impact to human health or the environment resulting from noncompliance with any requirements specified in this permit, including any monitoring as necessary to determine the nature and

impact of the stormwater discharge. When necessary to maintain compliance with the permit requirements, the permittee shall halt or reduce those activities under its control.

When necessary to achieve compliance with the terms and conditions of this NPDES general permit, the permittee shall install, operate and maintain backup systems or auxiliary facilities to supplement the erosion control measures and best management practices proposed in the NOI.

11.2 Severability -

The provisions of this NPDES general permit are severable. If any provision of this NPDES general permit or any circumstance is held invalid, the application of such provision to other circumstances and the remainder of the NPDES general permit shall not be affected thereby.

11.3 Permit Modifications and Terminations -

As provided by KAR 28-16-62, after notice and opportunity for a hearing, this permit may be modified, suspended or revoked or terminated in whole or in part during its term for cause as provided, but not limited to those set forth in KAR 28-16-62 and KAR 28-16-28b through g.

The permittee shall furnish to the Director, within a reasonable amount of time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request, copies of all records required to be kept by this permit. The filing of a request by the permittee for a permit modification or revocation and reissuance, or a notification of termination, planned changes or anticipated noncompliance does not stay any permit condition.

11.4 Change in Discharge -

All discharges authorized herein shall be consistent with the requirements and conditions of this NPDES general permit.

The SWP2 Plan shall be amended or modified to reflect significant changes to the project and/or the stormwater discharges in accordance with the applicable requirements of Part 7.3 of this NPDES general permit.

11.5 Discovery During Construction -

In the event contaminated soil, groundwater contamination, or contamination from hazardous substances are discovered at the site during construction activities, the permittee shall report the discovery to KDHE verbally within 24 hours to (785) 296-5549, and within 5 business days in writing at the stated address in

Part 10.2 of this NPDES general permit. Until site evaluations have been completed and instruction has been provided by KDHE, construction activities in the contaminated area shall cease and additional provisions shall be provided to immediately mitigate discharges from the contaminated area.

Any discovery during construction activities of threatened or endangered species on the site or in the downstream receiving waters, or of a historical or archeological site, that were not previously identified or addressed in the SWP2 Plan needs to be reported to the KDWP&T or KSHS and KDHE - Bureau of Water. Until site evaluations have been completed and instruction has been provided by the appropriate agencies, construction activities in the affected area shall cease.

If soil contamination, hazardous substances, threatened or endangered species, or historical or archeological sites are discovered during construction activities, the SWP2 Plan shall be modified or amended to reflect this new information in accordance with the requirements and conditions of Part 7.3 of this NPDES general permit.

11.6 Removed Substances –

Solids, sludge, sediment, filter backwash, or other pollutants removed in the course of treatment or control of stormwater runoff shall be properly managed, utilized, and/or disposed of in accordance with applicable statutes and regulations to prevent pollution of surface water, groundwater, or soil.

11.7 Civil, Criminal, and Administrative Liability -

Kansas law provides for civil and criminal punishment including fines and imprisonment for violations of this NPDES general permit. The permittee shall comply with all requirements of this NPDES general permit. Except as authorized in paragraph 11.10 below, nothing in this permit shall be construed to relieve the permittee from administrative, civil or criminal penalties for noncompliance as provided for in KSA 65-161 et seq., and 33 USC Section 1319.

11.8 Property Rights –

The issuance of this NPDES general permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property, nor any invasion of personal rights, nor any infringement or violation of Federal, State or local laws or regulations. This NPDES general permit in no way reduces or eliminates the permittee's responsibilities to landowners whose property may be traversed by stormwater runoff from the project site either before, during, or after construction of the planned project. It is the permittee's responsibility to obtain any necessary approvals from any affected property owner.

11.9 Duty to Mitigate –

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this NPDES general permit which has a reasonable likelihood of adversely affecting human health or the environment.

11.10 Bypass –

Any diversion or bypass of facilities necessary to maintain compliance with this NPDES general permit is prohibited except where necessary to prevent loss of human life, personal injury, or severe property damage, and where no feasible alternative to the bypass exists.

Any bypass which occurs during construction activities which may affect a threatened or endangered species, or a historical or archeological site, on site or in the receiving water body, shall be reported to KDHE verbally within 24 hours to (785) 296-5549, and within 5 business days in writing at the stated address in Part 10.2 of this NPDES general permit.

If a bypass occurs during construction activities, the SWP2 Plan shall be modified or amended to prevent future occurrences in accordance with the requirements and conditions of this NPDES general permit.

ENDNOTES

1. The NPDES general permit, application forms, guidance material, the rainfall erosivity waiver application, and reference material is available on the KDHE Stormwater Website at www.kdheks.gov/stormwater. The website also provides links to EPA guidance documents and the instructions for the rainfall erosivity calculation, Fact Sheet 3.1 - Storm Water Phase II Final Rule Construction Rainfall Erosivity Waiver

Material available on the KDHE Stormwater Website www.kdheks.gov/stormwater includes the NPDES general Permit, Notice of Intent, Notice of Termination, Notice of Transfer of Owner/Operator, Individual Lot Certification, and the Definitions and Acronyms in Adobe Acrobat Reader format (pdf).

Reference material available on the KDHE Stormwater Website at www.kdheks.gov/stormwater includes the Fact Sheet, Rainfall Erosivity Waiver Application, a list of Exceptional State Waters, Special Aquatic Life Use Waters and Outstanding National Resource Waters, and a link to the current Kansas Surface Water Register and maps.

2. The owner or operator must determine whether discharging stormwater runoff from construction activities on the site is subject to any local applicable requirements. To determine the local requirements applicable to each construction project, the owner or operator must contact the local Municipal Separate Storm Sewer System (MS4) operator. A list of MS4 operators who have or may be required to have a local stormwater pollution prevention program is available on the KDHE Stormwater Website at www.kdheks.gov. This list is provided and maintained for information only and will not necessarily include all MS4 operators with a local program.

3. If the applicant is uncertain if the project is located on Indian Country land, please contact the Bureau of Indian Affairs Southern Plains Regional Office - Natural Resources Department at (405) 247-6673 and the EPA Region VII Tribal Program at (913) 551-7969 or (913) 551-7374. EPA is the permitting authority on Indian Country land. To request authorization to discharge stormwater runoff from construction activities conducted on Indian Country land the applicant must contact EPA.

4. To determine if your project is located near one of these areas find the stream segment(s) or lake(s) which receive(s) the stormwater runoff on the Kansas Surface Water Register Maps, then check the designated uses of the stream segment(s) or lake(s) in the Kansas Surface Water Register. Applicants can download a copy of the Surface Water Register from the KDHE Stormwater Website at www.kdheks.gov/stormwater. At the time of this general NPDES permit issuance there were no Critical Water Quality Management Areas established. The stormwater website at: www.kdheks.gov/stormwater includes the most current list should an area be established.

5. The referenced guidance documents are available on-line at: <http://nepis.epa.gov/>. Links to the referenced guidance are also available at the KDHE website: <http://kdheks.gov/stormwater>.

6. Certification as a professional in erosion and sediment control is available through CPESC, Inc. CPESC information can be obtained through the internet at www.cpesc.org, or by calling (828) 655-1600. For other additional educational opportunities and information, contact the International Erosion Control Association at www.ieca.org or by calling (800) 455-4322.

7. Routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility that disturbs less than 5 acres is not considered to be construction activity, and therefore is not subject to construction stormwater permitting requirements.

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KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT

BUREAU OF WATER



KANSAS WATER POLLUTION CONTROL

AND

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

STORMWATER RUNOFF FROM CONSTRUCTION ACTIVITIES

GENERAL PERMIT

APPENDIX 1

DEFINITIONS & ACRONYMS

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Stormwater Runoff from Construction Activities General Permit
Definitions and Acronyms

These definitions pertain to the Kansas Water Pollution Control General Permit and Authorization to Discharge STORMWATER RUNOFF FROM CONSTRUCTION ACTIVITIES under the National Pollutant Discharge Elimination System. Persons subject to the NPDES general permit for Stormwater Runoff From Construction Activities should make themselves familiar with this list of definitions.

"Antidegradation" means the regulatory actions and measures taken to prevent or minimize the lowering of water quality in surface waters of the state, including those streams, lakes, and wetlands in which existing water quality exceeds the level required for maintenance and protection of existing uses.

"Authorization" means written authorization from KDHE to discharge stormwater runoff from construction activities. Upon acceptance and approval of the Construction Stormwater Notice of Intent (NOI) and required supporting documentation, KDHE will indicate the authorization and date on the front page of the NOI form by the Secretary of KDHE's signature on the form, and assign State and Federal Authorization numbers. Upon receipt of this Authorization, the permittee is authorized to discharge stormwater runoff from construction activities from the construction site identified in the NOI and supporting documents.

"Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

"Borrow Sites" means areas where materials are excavated for use as fill.

"Buffer" means for the purposes of this permit, an area of natural vegetation surrounding streams, rivers, lakes, wetlands, or other waters of the U.S. within which construction activities are restricted.

"Bypass" means any diversion of contaminated stormwater runoff away from BMPs.

"Combined Sewer System" means sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe.

"Commencing Construction" means starting to remove vegetation or disturb the soil located at the site.

"Construction Activity" means any construction practices or work including, but not limited to, clearing, grubbing, grading, and excavation which disturbs one (1.0) acre or more; or which is part of a larger common plan of development or sale which disturbs a cumulative total area of one (1.0) acre or more during the life of the project.

"Construction and Development Effluent Guidelines" as published in 40 CFR § 450 is the regulation requiring effluent limitations guidelines (ELG's) and new source performance standards (NSPS) for controlling the discharge of pollutants from construction sites.

"Construction Site" means the land or water area where construction activities will occur and where stormwater controls will be installed and maintained. The construction site includes construction support activities, which may be located at a different part of the property where the primary construction activity will take place, or on a different piece of property altogether. The construction site is often a smaller subset of the lot or parcel within which the project is taking place.

"Construction Support Activities" means the various construction-related activities that occur alongside the construction activity, and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.

"Contaminated Groundwater" means groundwater where an actual or potential environmental or public health threat may be deemed to exist as a result of physical, chemical, biological, or radiological substances, or a combination of these substances, has been released into subsurface waters of the state and results in a concentration or amount of a substance in excess of the numerical criteria designated for aquatic life protection, agricultural use, or public

Stormwater Runoff from Construction Activities General Permit

Definitions and Acronyms

health protection as provided in the Kansas Surface Water Quality Standards: Table of Numeric Criteria or have groundwater concentration levels exceeding the most current version of the KDHE "Risk-based Standards for Kansas (RSK)" manual, Tier 2 for Residential Scenarios - Soil to Groundwater Pathways, or if above RSK levels, the concentrations are not significantly different than area natural background concentrations (RSK Tier 1 evaluation). The manual can be downloaded from the following webpage: www.kdheks.gov/remedial/rsk_manual_page.htm.

"Contaminated Soil" are soils that have soil concentration levels exceeding the lowest concentration of those included in the most current version of the KDHE "Risk-based Standards for Kansas (RSK)" manual, Tier 2 for Residential Scenarios or if above the RSK levels, the concentrations are not significantly different than area natural background concentrations (RSK Tier 1 evaluation). The manual can be downloaded from the following webpage: www.kdheks.gov/remedial/rsk_manual_page.htm.

"Control Measure" refers to any stormwater control, BMP, or other method (including narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

"Critical Water Quality Management Area" means a watershed, or a portion of a watershed, in which application of minimum state or national wastewater and water quality management practices and procedures cannot be reasonable expected to result in attainment of water quality goals, attainment of water quality standards, protection of resources of the state, prevention of excessive sediment deposition in stream beds, lakes or reservoirs, or prevention of destruction of fishery habitat; or an area in which additional treatment and control of pollutants can result in additional cost effective benefits.

"CWA" means the Clean Water Act or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., as amended on February 4, 1987.

"Defined Drainage" means any water course which has a well-defined bed and banks and a drainage area above the point in question exceeding 160 acres or a greater acreage designated by the Chief Engineer, Kansas Department of Agriculture. The stream need not flow continuously and may flow only briefly after a rain in the watershed.

"Department" means the Kansas Department of Health and Environment.

"Dewatering" means the act of draining or pumping accumulated stormwater and/or groundwater from excavations, building foundations, vaults, trenches, etc.

"Director" means the Director of the Division of Environment, of the Kansas Department of Health and Environment.

"Discharge Monitoring Requirement" means a requirement to observe or evaluate a discharge and note the conditions observed.

"Discharge of Stormwater Associated with Construction Activity" as used in this permit, a discharge of pollutants in stormwater from areas where land-disturbing activities (e.g., clearing, grading, or excavation), construction materials or equipment storage or maintenance (e.g., fill piles, borrow area, concrete truck chute washdown, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants), are located.

"Discharge Point" means for the purposes of this permit, the location where collected and concentrated stormwater flows are discharged from the construction site.

"Drainage Courses or Drainage Swales" means an open linear depression, whether constructed or natural, that functions for the collection and drainage of surface water.

"Duly Authorized Representative" means somebody who speaks, acts or votes on behalf of others. For the purposes of this stormwater general permit, the duly authorized representative either 1) has operational control over

Stormwater Runoff from Construction Activities General Permit
Definitions and Acronyms

the facility; or 2) has the day-to-day operational control of those activities at the facility necessary to ensure compliance.

"Effluent Limitation" means any restriction established by the Director on quantities, rates, and concentrations of chemical, physical, biological and other constituents which are discharged from point sources.

"Effluent Limitations Guideline" (ELG) - defined in 40 CFR § 122.2 as a regulation published by the EPA Administrator under section 304(b) of CWA to adopt or revise effluent limitations.

"Entrance and Exit Points" means any points of entry to and exit from the construction site to be used by vehicles and equipment during construction activities.

"EPA" means the U.S. Environmental Protection Agency.

"Exceptional State Waters" means any of the surface waters or surface water segments that are of remarkable quality or of significant recreational or ecological value, are listed in the surface water register, as defined in K.A.R. 28-16-28b, and are afforded the level of water quality protection under the anti-degradation provisions of K.A.R. 28-16-28c(a) and the mixing zone provisions of K.A.R. 28-16-28c(b).

"Final Stabilization" means all soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of 70% of the cover which is typical for undisturbed areas, unpaved areas, or areas not covered by permanent structures, in the geographic location of the construction site, has been established, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed. Certain exceptions to this exists for final stabilization of individual lots or completion of construction activities within a larger common plan of development.

"Hazardous Substance" means elements and compounds designated as a hazardous substance pursuant to Section 311(b)(2)(A) of the CWA at 40 CFR 116.4.

"ILC" means the Individual Lot Certification which is to be completed by the permittee and the purchaser of an individual lot or parcel of the overall tract subject to the general NPDES permit for Stormwater Runoff from Construction Activity.

"Impaired Water" "Water Quality Limited Segment" means a surface water that has been identified by KDHE pursuant to Section 303(d) of the Clean Water Act as not meeting applicable Kansas Surface Water Quality Standards. Impaired waters include both waters with approved or established TMDLs, and those for which a TMDL has not yet been approved or established. (Note: To view the Section 303(d) list and TMDLs go to <http://www.kdheks.gov/tmdl/index.htm>)

"Indian Country Land" means (1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running throughout the reservation; (2) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of the State; and (3) All Indian allotments, the Indian titles to which have not been extinguished, including rights of way running through the same.

"Infeasible" means not technologically possible, or not economically practicable and achievable in light of best industry practices.

"Install" or "Installation" means when used in connection with stormwater controls, to connect or set in position stormwater controls to make them operational.

"KDHE" means the Kansas Department of Health and Environment.

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Definitions and Acronyms

"Material Handling and Staging Area" means a temporary area on the construction site used for receiving, processing, storing materials to prevent the material from being spilled or coming into contact with runoff.

"Material Washout Area" means a temporary containment area used for the washing of applicators and containers of paint, concrete, and other materials.

"Minimize" means to reduce and/or eliminate to the extent achievable using stormwater controls (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

"Municipal Separate Storm Sewer System (MS4)" means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are owned or operated by a state, city, town, borough, county, parish, district association, or other public body which is designed or used for collecting or conveying stormwater.

"National Pollutant Discharge Elimination System" means the national system for the issuance of permits under 42 U.S.C. Section 1342 and includes any state or interstate program which has been approved by the administrator, in whole or in part, pursuant to 42 U.S.C. Section 1342.

"NOI" means the Notice of Intent form which is to be used to apply for authorization to discharge under this general permit [A copy of the NOI form is provided as part of the general permit.].

"Non-Stormwater Discharges" means discharges that do not originate from storm events. They can include, but are not limited to, discharges of process water, air conditioner condensate, noncontact cooling water, vehicle wash water, sanitary wastes, concrete washout water, paint wash water, irrigation water, or pipe testing water.

"NOT" means the Notice of Termination form which is to be completed by the permittee once the project is completed and the site is stabilized. [A copy of the NOT form is provided as part of the general permit.]

"NOTO" means the Notice of Transfer of Ownership form which is to be completed by the permittee and the new site owner or operator when sale of the entire permitted tract occurs. [A copy of the NOTO form is provided as part of the general permit.]

"Oil and Gas Exemption" means changes to the Federal Clean Water Act (CWA) which exempt oil and gas exploration, production, processing, or treatment operations, and transmission facilities from National Pollutant Discharge Elimination System (NPDES) stormwater permitting requirements associated with stormwater runoff from construction activities. (see 40 CFR 122.26 (c) (1) (iii) for exclusions to the CWA exemption.)

"Operational" for the purpose of this permit, stormwater controls are made "operational" when they have been installed and implemented, are functioning as designed, and are properly maintained.

"Outfall" see "Discharge Point".

"Outstanding National Resource Water" (ONRW) means any of the surface waters or surface water segments of extraordinary recreational or ecological significance identified in the Kansas Surface Water Register and afforded the highest level of water quality protection under the antidegradation provisions of K.A.R. 28-16-28c(a) and the mixing zone provisions of K.A.R. 28-16-28c(b).

"Owner", "Owner or operator", or "owner/operator" means the party or parties that either individually or taken together who are the responsible party liable under the Clean Water Act and meet the following criteria: they have operational control over the site specifications; and, they have the day-to-day operational control of those activities at the site necessary to ensure compliance. For a typical commercial construction site, KDHE herein defines the owner or general contractor to be the "owner or operator". For a typical residential development (subdivision), KDHE herein defines the owner or an authorized representative to be the "owner or operator". Each owner or

Stormwater Runoff from Construction Activities General Permit

Definitions and Acronyms

operator who individually does not engage in construction activity of greater than one (1.0) acre must apply when the construction activity is part of a larger common plan of development.

"Permit" means an authorization, license, or equivalent control document issued by the Director to implement the requirements of K.A.R. 28-16-57. Permit includes a 'general permit' (K.A.R. 28-16-150). Permit does not include any document which has not yet been subject to final agency action, such as a "draft permit" or "proposed permit."

"Permittee" means the individual, company, corporation, institution, municipality, township, county, federal agency, owner, operator, or legally constituted sewer district which is authorized by a Kansas Water Pollution Control permit to discharge to the waters of the State and which has operational control of the permitted discharge by specifying activities at the site.

"Point Source" means any discernible, confined, and discrete conveyance, including, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or floating craft from which pollutants are or may be discharged. This term may include structures or site conditions that act to collect and convey stormwater runoff from roadways, urban areas, or industrial sites. This term shall not include agriculture stormwater discharges or return flows from irrigated agricultural land.

"Rainfall Erosivity Waiver" means a waiver of the applicable requirements of the general NPDES permit for Stormwater Runoff from Construction Activities. Owners or operators of construction activities between one and five acres which are eligible for coverage under the general NPDES permit for Stormwater Runoff from Construction Activities may receive a waiver from KDHE provided the value of the rainfall erosivity factor ("R" in the Revised Universal Soil Loss Equation) is less than five (5) during the period of construction activity.

"Run-on" means sources of stormwater that drain from land located upslope or upstream from the regulated site in question.

"Sediment Basin Design Criteria" are requirements for sedimentation structures to be designed to provide a detention volume at least 3,600 cubic feet of storage per acre of total area draining into the sediment basin. KDHE may approve alternate storage volumes if a significant portion of undisturbed area drains to the sediment basin or for areas in Western Kansas where the 2 year, 30 minute rain event is less than 1.3 inches. Runoff calculations based on a detention volume from a 2 year, 30 minute rainfall event with a minimum runoff coefficient of 0.77 for disturbed acreage and appropriate runoff coefficients for undisturbed acreage must be provided to document and justify the revised storage volume requirement.

Sediment basins must be designed to provide the required storage volume below the elevation of the overflow weir, spillway or riser top that allows mass volume of discharge. Designs shall include outlet structures that withdraw water from the surface, unless infeasible.

"Severe Property Damage" means substantial physical damage to property or substantial and permanent loss of natural resources which would be reasonably expected to occur in the absence of a bypass.

"Significant Materials" includes, but is not limited to: raw materials, fuels, materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the facility is required to report pursuant to EPCRA Section 313; fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with storm water discharges.

"Significant Pollution Potential" means the discharge or potential discharge of one or more pollutants that does or has the potential to degrade water quality, violate a water quality standard, or impair a designated use of a classified water. KDHE, in making a determination as to whether a discharge has a significant pollution potential will consider the size and location of the discharge, the quantity and nature of the discharge, and other relevant factors. Examples of a significant pollution potential would include, but not be limited to, contaminated soils or groundwater within the construction site, uncovered salt or salt/sand storage piles; spilled or leaking toxic or hazardous waste; spilled or leaking fuel, oils, grease, solvents; etc.

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"Soil Exposed" means for the purposes of this permit, soils that have been disturbed due to the commencement of construction activities.

"Special Aquatic Life Use waters" means surface waters which contain combinations of habitat types and indigenous biota not found commonly in the state, or surface waters which contain representative populations of threatened or endangered species.

"Stabilization" means the use of vegetative and/or non-vegetative cover to prevent erosion and sediment loss in areas exposed through the construction process.

"Steep Slope" means any slope occurring on the construction site that is 2.5 horizontal to 1 vertical or greater (approximately 40 percent).

"Storm Sewer" means a system of pipes (separate from sanitary sewers) that carries stormwater runoff from buildings and land surfaces.

"Stormwater" means stormwater runoff induced by atmospheric precipitation, including snow melt runoff, and surface runoff and drainage.

"Stormwater Control" See "Control Measure"

"Stormwater Pollution Prevention Plan (SWP2 Plan)" means a site-specific, written document and construction plans that: (1) identifies potential sources of stormwater pollution at the construction site; (2) describes stormwater control measures to reduce or eliminate pollutants in stormwater discharges from the construction site; and (3) identifies procedures the operator will implement to comply with the terms and conditions of this general permit.

"Stormwater Runoff from Construction Activities" means stormwater runoff from areas where construction activities are located. Construction activities include clearing, grading and excavating that result in land disturbance of equal to or greater than one (1.0) acre of total land area. Construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one (1.0) acre. Construction activities do not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. (See 40 CFR 122.26(b)(14 -15) for further clarification.)

"Stormwater Runoff from Industrial Activities" means the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the Kansas Water Pollution Control program.

For the categories of industries identified in this definition, the term includes, but is not limited to, stormwater discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 CFR 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials; and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater.

For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation or conveyance of any raw material, intermediate product, final product, by-product or waste product. The term excludes areas located on the plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded area is not mixed with stormwater drained from the above described areas.

Stormwater Runoff from Construction Activities General Permit

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Industrial facilities (including industrial facilities which are Federally, State or municipally owned or operated and meet the description of the facilities listed in this paragraph (i)-(xi) of this definition) include those facilities designated under 40 CFR 122.26(a)(1)(v).

The following categories of facilities are considered to be engaging in industrial activity for the purpose of this general permit/definition:

Category (i) - Facilities subject to storm water effluent limitations guideline, new source performance standards, or toxic pollutant effluent standards under 40 CFR subchapter N. Limits and/or standards for this category are subject to change and new limits and standards may be adopted. To verify applicability, see 40 CFR subchapter N.

Stormwater Effluent Guidelines

For a discharge to be covered under stormwater effluent guidelines, the facility must have a stormwater discharge subject to stormwater effluent guidelines. At the time of permit issuance, facilities that have stormwater effluent limitations guidelines for at least one of their subcategories include the following:

40 CFR Subchapter N

Part 411 Cement manufacturing
Part 412 Concentrated Animal Feeding Operations (CAFOs)
Part 418 Fertilizer manufacturing
Part 419 Petroleum refining
Part 420 Iron & steel manufacturing
Part 422 Phosphate manufacturing
Part 423 Steam electric power generating
Part 434 Coal mining
Part 436 Mineral mining & processing
Part 440 Ore mining & dressing
Part 442 Transportation equipment cleaning
Part 443 Paving and roofing materials
Part 445 Landfills

A facility that falls into one of these Parts should examine the effluent guideline to determine if it is categorized in one of the subcategories that have stormwater effluent guidelines. If a facility is classified in one of those subcategories, that facility is subject to the standards listed in the CFR for that category, and as such is required to submit an NOI for any stormwater discharge subject to the stormwater effluent guideline.

Toxic Pollutant Effluent Standards

Facilities subject to toxic pollutant effluent standards refers to the standards established pursuant to CWA section 307(a)(2) and codified at 40 CFR Part 129. Part 129 applies only to manufacturers of six pesticide products which are defined as toxic pollutants. Please note that the phrase "facilities subject to toxic pollutant effluent standards" does not refer to those industries subject to effluent limitation guidelines for toxics under 40 CFR sub-chapter N.

Manufacturers of the following pesticides are subject to regulation under these provisions:

(a) Aldrin/Dieldrin, (b) DDT, (c) Endrin, (d) Toxaphen (e) Benzidine, and (f) Polychlorinated Biphenyls (PCBs):

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- (a) Aldrin/Dieldrin---Aldrin means the compound aldrin as identified by the chemical name, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4-endo-5,8-exo-dimethanonaphthalene; "Dieldrin" means the compound the dieldrin as identified by the chemical name 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-5,8-exo-dimethanonaphthalene.
- (b) DDT---DDT means the compounds DDT, DDD, and DDE as identified by the chemical names:(DDT)-1,1,1-trichloro-2,2-bis(p-chlorophenyl) ethane and some o,p 'isomers; (DDD) or (TDE)-1,1-dichloro-2,2-bis(p-chlorophenyl) ethane and some o,p 'isomers; (DDE)-1,1-dichloro-2,2-bis(p-chlorophenyl) ethylene.
- (c) Endrin---Endrin means the compound endrin as identified by the chemical name 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-5,8-endodimethanonaphthalene.
- (d) Toxaphene---Toxaphene means a material consisting of technical grade chlorinated camphene having the approximate formula of C₁₀ H₁₀ Cl₈ and normally containing 67--69 percent chlorine by weight.
- (e) Benzidine---Benzidine means the compound benzidine and its salts as identified by the chemical name 4,4 '-diaminobiphenyl.
- (f) Polychlorinated Biphenyls (PCBs) polychlorinated biphenyls (PCBs) means a mixture of compounds composed of the biphenyl molecule which has been chlorinated to varying degrees.

New Source Performance Standards (NSPS)

For a stormwater discharge associated with industrial activity to be covered under NSPS, the facility must have an activity subject to the NSPS. The new source varies based on the publication date of a particular effluent guideline. Most effluent guidelines listed in 40 CFR Subchapter N contain NSPS.

The following categories of 40 CFR Subchapter N do not have new source performance standards. All other categories have at least one subcategory with new source performance standards.

Part 454 Gum and wood chemicals manufacturing
Part 459 Photographic
Part 460 Hospital

Category (ii) - Facilities classified as Standard Industrial Classifications 24 (except 2434), 26 (except 265 and 267), 28 (except 283), 29, 311, 32 (except 323), 33, 3441, 373;

Category (iii) - Facilities classified as SIC codes 10-14 including active or inactive mining operations (except for areas of coal mining operations no longer meeting the definition of a reclamation area under 40 CFR 434.11(1) because the performance bond issued to the facility by the appropriate SMCRA authority has been released, or areas of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990), and oil and gas exploration, production, processing, or treatment operations, or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with, any overburden, raw material, intermediate products, finished products, byproducts or waste products located on the site of such operations (inactive mining operations are mining sites that are not being actively mined, but which have an identifiable owner/ operator; inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction,

Stormwater Runoff from Construction Activities General Permit

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beneficiation, or processing of mined materials, nor sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim).

A facility with an existing or new discharge composed entirely of stormwater from oil or gas exploration, production, processing, or treatment operations or transmission facility is not required to submit a request for authorization under this general permit unless the facility:

(A) Has a discharge of stormwater composed entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying collection runoff and which are contaminated by contact with, or come into contact with, any overburden, raw material, intermediate products, finished products, byproducts, or waste products on the site of such operations; or

(B) Has had a discharge of stormwater resulting in the discharge of a reportable quantity for which notification is or was required pursuant to 40 CFR 110.6, 40 CFR 117.21 or 40 CFR 302.6 at anytime since November 16, 1987; or

(C) Causes or contributes to a violation of a water quality standard.

Category (iv) - Hazardous Waste Hazardous waste treatment, storage, or disposal facilities including those that are operating under interim status or a permit under Subtitle C of RCRA.

Category (v) - Landfills, land application sites, and open dumps that receive or have received any industrial waste (waste that is received from any of the facilities described under categories (i) - (xi)) including those that are subject to regulations under Subtitle D of RCRA.

Category (vi) - Recycling of materials, including metal scrap yards, battery reclaimers, salvage yards, and automobile junkyards, including but limited to those classified as SIC 5015 (used motor vehicle parts) and SIC 5093 (scrap and waste materials).

Category (vii) - Steam electric power generating facilities, including coal handling sites.

Category (viii) - Transportation facilities classified by the SIC codes 40, 41, 42 (except 4221-4225), 43, 44, 45, and 5171 listed below which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility that are either involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, airport deicing operations, or which are otherwise identified under categories (i)-(vii) or (ix)-(xi) of this definition are associated with industrial activity, and need permit coverage. Based on a potential for being a significant contributor of pollutants, KDHE has determined Aerial Spray Operations at Airports are subject to coverage for stormwater runoff associated with industrial activity.

Category (ix) - Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR 403. Not included are farm lands, domestic gardens or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with section 405 of the Clean Water Act.

Category (x) - Construction activity is not covered under this definition. The construction "operator" of both large and small construction activities must apply for coverage under an individual permit or the General Stormwater Permit for Construction Activity requirements.

Stormwater Runoff from Construction Activities General Permit

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Category (xi) - Facilities under Standard Industrial Classifications 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-25.

"Surface water" means all of the following:

- (1) streams, including rivers, creeks, brooks, sloughs, draws, arroyos, canals, springs, seeps and cavern streams, and any alluvial aquifers associated with these surface waters;
- (2) lakes, including oxbow lakes and other natural lakes and man-made reservoirs, lakes and ponds; and
- (3) wetlands, including water bodies meeting the technical definition for jurisdictional wetlands given in the "corps of engineers wetlands delineation manual," as published in January 1987, which is hereby adopted by reference.

"Surface Waters of the State" means all surface waters occurring within the borders of the state of Kansas or forming a part of the border between Kansas and one of the adjoining states.

"Temporary Stabilization" means a condition where exposed soils or disturbed areas are provided a temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb this area.

"Tier 1 Water" means, in regard to antidegradation, a level of protection that provides a "floor" which protects water quality and existing designated uses. Water quality must be preserved to protect and maintain those existing uses. Activities that would lower water quality below levels necessary to maintain existing designated uses are prohibited.

"Tier 2 Water" means, in regard to antidegradation, high quality waters where water quality exceeds the criteria associated with the assigned designated uses. Limited water quality degradation is allowed in high quality water where the degradation is necessary to accommodate important social or economic development, but only if designated uses are still maintained and the highest statutory and regulatory requirements for all point sources of pollution and all cost effective and reasonable best management practices for nonpoint sources of pollution are achieved.

"Tier 2½ Water" means in regard to antidegradation, means a water classified as an Exceptional State Water (see definition of "Exceptional State Waters" in Appendix 1).

"Tier 3 Water" means, in regard to antidegradation, any waters designated as an Outstanding National Resource Water (ONRW) (see definition of Outstanding National Resource Water in Appendix 1).

"Total Maximum Daily Load (TMDL)" is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes wasteload allocations (WLAs) for point source discharges; load allocations (LAs) for nonpoint sources and/or natural background, and must include a margin of safety and account for seasonal variations. (Note: To view TMDLs go to <http://www.kdheks.gov/tmdl/index.htm>.)

"Uncontaminated Groundwater" means water removed from excavation or pumped from an aquifer for dewatering purposes. The water is considered uncontaminated if there is no groundwater contamination within 1,000 feet of the discharge. Suspended solids and turbidity are not sources of contamination for the purposes of this definition but the excavation dewatering discharge must be treated as necessary to remove suspended solids and turbidity to prevent any violation of water quality standards.

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"Urbanized Area" means a land area comprising one or more places; central place(s); and the adjacent densely settled surrounding area; or urban fringe; that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.

List of Acronyms

BMPS - Best Management Practices
C & D - Construction & Development
CERCLA - Comprehensive Environmental Response, Compensation and Liability Act
CFR - Code of Federal Regulations
CGP - Construction General Permit
CWA - Clean Water Act
CWQMA - Critical Water Quality Management Area
EPA - U.S. Environmental Protection Agency
ESW - Exceptional State Water
ILC - Individual Lot Certification
K.A.R. - Kansas Administrative Regulations
KDHE - Kansas Department of Health and Environment
KDWPT - Kansas Department of Wildlife, Parks and Tourism
K.S.A. - Kansas Statutes Annotated
KSHPO - Kansas State Historic Preservation Office
KSHS - Kansas Historical Society
MS4 - Municipal Separate Storm Sewer System
NOI - Notice of Intent
NOT - Notice of Termination
NOTO - Notice of Transfer of Ownership
NPDES - National Pollutant Discharge Elimination System
NRDC - Natural Resources Defense Council
NTIS - National Technical Information Service
ONRW - Outstanding National Resource Water
RCRA - Resource Conservation and Recovery Act
SALU - Special Aquatic Life Use
SHPO - State Historic Preservation Officer
SMCRA - Surface Mining Control and Reclamation Act
SPCC - Spill Prevention Control Countermeasures
SWP2 Plan or SWPPP - Stormwater Pollution Prevention Plan
U.A. - Urbanized Areas
U.S.C. - United States Code

SECTION 4

SWPPP Narrative

**MOHAWK PARK PHASE 2
6649 LAMAR STREET
MISSION, KS 66202**

**NPDES Storm Water Pollution Prevention Plan for
Storm Water Discharges Associated with
Construction Activity**

Confluence

Project No. 23093

November 2023 to August 2024

Insert Contractors Certification and NOT Here

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2.0 Site Evaluation

The following sections describe existing conditions at the site.

2.1 Topography and Drainage

The existing topography of the project area includes a gentle slope across the site with elevations ranging from 1048' to 1032'. The project includes one benchmark as presented in the Land Disturbance Plans.

2.2 Soils

The soils on the project site were identified according to the soil survey maps in the *Soil Survey of Johnson County, Kansas*. The following soils are found on the Project Site:

7545—Sharpsburg-Urban land complex, 4 to 8 percent slopes

Drainage class: Moderately well drained
Runoff class: Medium
Parent material: Silty and clayey loess
Hydrologic Soil Group: C

2.3 Runoff Water Quality

No surface water quality data is available for the project sites. However, due to the nature of the site, runoff could be expected to contain some suspended solids.

2.4 Receiving Waters

Runoff from the project site flows by overland flow to on site storm sewer. Mohawk Park is within the Brush Creek watershed, which is approximately 13,500 total acres.

3.0 Site Construction Plan

The following sections describe the proposed development and site construction plan.

3.1 Construction Activities

The project includes the construction of new public park facilities in Mohawk Park in Mission, Kansas. Soil disturbing activities will include clearing, grubbing, demolition of existing pavements, mass grading, and final grading. Site activities will also include: grading permanent swales and berms; construction of proposed parking lot; construction of proposed buildings and parking facilities; installation of site utilities – sanitary, water, and storm sewer; installation of erosion control structures throughout the site; and permanent site landscaping. The project will have construction access off of Lamar Street, at the existing parking lot. This construction entrance will eventually be removed and re-established as landscaped turf area. The construction entrance will be stabilized with aggregate to reduce tracking of soil onto the surrounding roadways.

A record of the project site construction activities must be maintained as part of this Plan. Appendix A includes a form and instructions to record such information on an ongoing basis.

3.2 Construction Sequence

The project will be constructed generally following the sequence indicated below.

DESCRIPTION OF WORK - PHASE 2:

- INSTALL PERIMETER EROSION CONTROL MEASURES AND TREE PROTECTION FENCING.
- INSTALL TEMPORARY CONSTRUCTION ENTRANCE AROUND SITE.
- INSTALL TEMPORARY SWALES AND DIVERSION BERMS, WITH ROCK CHECK DAMS AND SILT FENCING WHERE NECESSARY.
- REMOVE TREES AND CLEAR AND GRUB INITIAL WORK AREAS.
- REMOVE EXISTING PARKING DRIVE OFF OF HORTON ST.
- REMOVE ADDITIONAL EXISTING PAVEMENT IN ACCORDANCE WITH PLANS.
- REMOVE EXISTING PLAY AREA
- INSTALL EROSION CONTROL MEASURES AROUND STORM SEWERS.
- INSTALL INTERMEDIATE SILT FENCES ON SLOPES AS EMBANKMENT OCCURS ACROSS SITE TEMPORARILY SEED AREAS DOWNSTREAM.
- MASS GRADE PERMANENT BERMS, PLAY FIELDS, AND LOOP TRAIL
- INSTALL LOOP TRAIL AND SPORT COURT

- INSTALL PERIMETER CURB AND GUTTER AND BASE COURSE OF ASPHALT IN PERIMETER DRIVE AREA.
- INSTALL ADDITIONAL EROSION CONTROL MEASURES AT TOES OF SLOPE ADJACENT TO CURB LINE AS APPLICABLE.
- COMPLETE FINAL GRADING, SEED/SOD, AND LANDSCAPE PERIMETER AREAS.
- INSTALL SURFACE COURSE ON PARKING DRIVE, WALKS AND FLATWORK.
- INSTALL PLAYGROUND/SURFACING PER MANUFACTURER INSTRUCTIONS
- COMPLETE FINAL GRADING AND SOD/LANDSCAPE AROUND SITE AND SIDEWALK AREAS.
- FINAL SITE CLEANUP.
- MAINTAIN EROSION CONTROL MEASURES UNTIL SITE IS STABILIZED.
- INSPECT AND RESEED REMAINING DISTURBED AREAS, WASHOUTS, ETC.
- REMOVE SEDIMENT BUILDUP, RESEED AND STABILIZE AS EROSION CONTROL MEASURES ARE REMOVED.

4.0 Storm Water Management Plan

This storm water management plan was designed following EPA guidelines. Structural sediment control devices will be the main means of storm water management. Storm water sediment controls will be installed before any construction begins.

4.1 General Description of Storm Water Management System

The potential for storm water runoff pollution will be present during construction of the subdivision. This risk will be minimized through the use of several control measures implemented before and during the construction sequence.

The storm water management system was designed in accordance with the EPA's guidance document entitled *Storm Water Management for Construction Activities – Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-005, September 1992). Structural measures are the main means of storm water management. Storm water control measures are described and shown on the Land Disturbance Plan Drawings.

It will be the responsibility of the Contractor to revise the Land Disturbance Plan Drawings if the location or types of control measures are changed in the field.

4.2 Project Site

The surface water management during construction will be through the use of silt fencing. The silt fencing will remove suspended solids before runoff outfalls from the site.

4.2.1 Stabilization Practices

Temporary and permanent stabilization methods will be used on the project site. Two major stabilization methods that will be used on the site are preserving existing vegetation where possible and disturbing only the area needed for project construction. Disturbed portions of the site will be stabilized within 14 days after construction activity has permanently ceased, with two exceptions – when snow cover precludes construction or construction will resume within 21 days. Stabilization practices may include permanent seeding and mulching.

4.2.2 Structural Practices

Temporary and permanent structural devices to divert, store, or limit runoff from disturbed areas will be used on the project site. Such devices may include: silt fences, swales, berms, inlet protection, and a temporary construction entrance. Details of the structural control measures are shown on the Land Disturbance Plans.

5.0 Potential Storm Water Pollutant Sources and Control Measures

Pollutants from various sources have the potential to enter the storm water system during project construction. A description of these potential pollutants and control measures to reduce the risk of storm water contamination is provided below.

5.1 Construction Silt and Dust

The post-development site runoff flows by overland flow to a downstream pond. Construction of the project will generate silt and fugitive dust.

Silt barriers (fences) will be installed perpendicular to the storm runoff on all disturbed slopes as shown on the Erosion Control Plan to control offsite discharges of silt. The silt barrier will be installed after the clearing and grubbing necessary for placement of the silt barrier is complete, but before the clearing and grubbing of the remaining work area is started. The silt barrier will remain in place until the up-slope surface is permanently stabilized. If construction in a particular area will cease temporarily, temporary soil stabilization will be implemented no more than 14 days after the construction has ceased unless activity will resume in that area within 21 days. Permanent stabilization will take place no later than 14 days after construction activities have permanently ceased in an area.

Fugitive dust may be generated during dry weather conditions. Dust control will be directed by the Construction Manager. Water sprays will be used for dust control.

5.2 Offsite Sediment Tracking

The surrounding streets will be kept relatively free of excess mud, dirt, and rock tracked from the project site. The site access drive will be constructed with a stabilized construction entrance to reduce tracking of sediment offsite.

5.3 Petroleum Products

Construction equipment will require diesel fuel and oil on a regular basis so the potential exists for spills or leaks. All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to ensure proper operation and reduce the chance of leaks. No “topping off” of fuel tanks will be allowed to reduce the possibility of spills.

Petroleum products will be stored in clearly labeled and tightly sealed containers or tanks. Any asphalt used onsite will be applied according to the manufacturer’s recommendations. Any soil contaminated by fuel or oil spills will be removed and disposed of at an approved disposal site by the Contractor.

5.4 Sanitary Wastes

A licensed sanitary waste management contractor will collect all construction or temporary sanitary wastes from portable units. The units will be maintained on a regular basis.

5.5 Hazardous Wastes

All hazardous waste materials will be disposed of according to local or state regulation or the manufacturer's recommendations. The Construction Manager who will also be responsible for their implementation will instruct site personnel of these regulations and recommendations.

5.6 Fertilizers

Fertilizers will be applied as recommended by the manufacturer. After application the fertilizer will be worked into the soil to limit exposure to storm waters. Fertilizers will be stored in a covered area or in watertight containers. Any partially used bags or containers will be properly sealed and stored to avoid spills or leaks.

5.7 Waste Materials

All construction waste material will be collected, deposited, and stored in metal dumpsters from a licensed solid waste management contractor. No construction waste materials will be buried onsite. Any burning will be conducted in accordance with local or state regulations. It is the responsibility of the Construction Manager to obtain any and all permissions and permits for burning if so locally allowed. All site personnel will be instructed of the proper waste disposal procedures by the Construction Manager.

5.9 Allowable Non-Storm Water Discharges

The following sources of non-storm water discharges from project construction activities may be combined with storm water discharges.

- Waters used to wash vehicles or to control dust
- Uncontaminated dewatering discharges
- Fire fighting waters
- Vegetation watering
- Potable or spring water discharges

6.0 Best Management Practices

Chemicals, petroleum products, and other materials will be used and stored on the project site. Best Management Practices, such as good housekeeping measures, inspections, containment, and spill prevention practices will be used to limit contact between storm water and potential pollutants.

6.1 Good Housekeeping

The good housekeeping practices listed below will be followed to reduce the risk of potential pollutants entering storm water discharges. All construction personnel will be responsible for monitoring and maintaining housekeeping tasks or notifying the appropriate person of a problem.

- Store only enough product to do the job.
- Store all materials in a neat and orderly manner, in the appropriate containers and, if possible, under a roof or within an enclosure.
- Keep products in the original container with the original manufacturer's label.
- Do not mix products unless recommended by the manufacturer.
- Use all of a product before disposing of the container.
- Use and dispose of products according to the manufacturer's recommendations or the Construction Manager's direction.
- Perform regular inspections of the storm water system and the material storage areas.
- When and where appropriate, use posters, bulletin boards, or meetings to remind and inform construction personnel of required procedures.

6.2 Hazardous Materials

Storage areas for hazardous materials such as oils, greases, paints, fuels, and chemicals, must be provided with secondary containment to ensure that spills in these areas do not reach waters of the State. Contingencies for the proper disposal of contaminated soils shall be established (use of licensed hauler and approved landfill, for example) early in the construction period.

6.3 Spill Prevention and Response

In addition to the good housekeeping and hazardous materials storage procedures described above, spill prevention and cleanup practices will be as follows.

- Construction personnel will be informed of the manufacturer's recommended spill cleanup methods and the location of that information and cleanup supplies.
- Materials and equipment for the cleanup of a relatively small spill will be kept in the materials storage area. These facilities may include brooms, rags, gloves, shovels, goggles, sand, sawdust, plastic or metal trash containers, and protective clothing.
- All containers will be labeled, tightly sealed, and stacked or stored neatly and securely.

The spill response procedure will be as follows:

- Step 1. Upon discovery of a spill, stop the source of the spill.
- Step 2. Cease all spill material transfer until the release is stopped and waste removed from the spill site.
- Step 3. Initiate containment to prevent spill from reaching State waters.
- Step 4. Notify a Supervisor or the Construction Manager of the spill.
- Step 5. The Construction Manager will coordinate further cleanup activities.
- Step 6. Any significant spill of hazardous material will be reported to the appropriate state and or local agencies at the following numbers:

National Response Center	1-800-424-8802
State Contacts:	
KDHE	785-296-1679 (24 Hours)
KEM	785-296-8013 (24 Hours)
Local Contacts:	
Police	911

- Step 7. Review the construction storm water pollution prevention plan and amend if needed. Record a description of the spill, cause, and cleanup measures taken.

7.0 Inspection, Maintenance, and Reporting Procedures

Site inspection and facility maintenance are important features of an effective storm water management system. Qualified personnel will inspect disturbed areas of the site not finally stabilized, storage areas exposed to precipitation, all control measures, and site access areas to determine if the control measures and storm water management system are effective in preventing significant impacts to receiving waters.

7.1 Erosion and Sediment Controls

The following procedures will be used to maintain erosion and sedimentation controls.

- All control measures will be inspected at least once a week and after each rainfall event producing runoff and daily during prolonged rainfall periods.
- All measures will be maintained in good working order. If a repair is necessary, it will be made within 24 hours of the inspection.
- Sediment will be removed from the silt barriers when it has reached one-third of the height of the barrier.
- Silt barriers will be inspected for depth of accumulated sediment, tears, attachment to posts, and stability on a weekly basis.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
- The Construction Manager will select individuals to be responsible for inspections, maintenance, repairs, and reporting. The designated individuals will receive the necessary training from the Construction Manager to properly inspect and maintain the controls in good working order.
- Inspection Form 1 will be completed after each inspection.
- The completed Inspection Forms will be kept with this Plan in Appendix B.

7.2 Non-Storm Water Controls

The following procedures will be used to maintain the non-storm water controls.

- All control measures will be inspected at least once a week and after each runoff producing rainfall event and daily during prolonged rainfall periods.
- All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of the inspection.
- The Construction Manager will select individuals to be responsible for inspections, maintenance, repairs, and reporting. The designated individuals will receive the necessary training from the Construction Manager to properly inspect and maintain the controls in good working order.
- Inspection form will be completed after each inspection.
- The completed Inspection Forms will be kept with this Plan in Appendix B.

7.3 Reporting

Inspection forms are provided in section 13 for recording inspections and maintenance of the control measures: After each inspection, the inspector completes an inspection report and inserts that report in Appendix B of this Plan.

A fully signed copy of this Plan and any supporting materials must be maintained at the project site from the date of project initiation to the date of final stabilization. All records and supporting documents will be compiled in an orderly manner and maintained for a period of three years following final stabilization.

The generation of reports, as part of the construction process and inspection or amendment procedures, provides accurate records that can be used to evaluate the effectiveness of this Plan and document the plans compliance. Changes in design or construction of the storm water management system are documented and included with the Plan to facilitate Plan review or evaluation. Section 8 contains the form for the log of modifications and amendments.

Plan amendments will be documented on the form in the front of this Plan and on the drawings. A record of construction activities will be maintained in Appendix A of this Plan. Completed inspection and maintenance forms will be kept in Appendix B of this Plan.

8.0 Certification of Compliance

This Construction Storm Water Pollution Prevention Plan reflects best management practices and erosion and sedimentation control measures for storm water management as recommended by the Environmental Protection Agency.

8.1 Contractor Certifications

The Contractor Certification forms provided in this section and in the beginning of this report indicate that each contractor or subcontractor working on the project site understands the terms, conditions, and intent of the NPDES General Permit for Construction Storm Water Discharges Associated with Construction Activity and will implement the measures described in this Plan appropriate to his area of work.

All contractors and subcontractors must complete the two separate forms. If additional sheets are needed due to more subcontractors on site than sheets provided herein, additional sheets may be copied and inserted into booklet at the job site.

9.0 Project Completion

Construction is considered complete when the project site is 90 percent (density) stabilized. The Construction Manager may terminate construction erosion and sediment control measures at this time. A Notice of Termination should be submitted to the Kansas Department of Health – Bureau of Water requesting termination of the Construction Storm Water Pollution Prevention Plan Permit.

Permanent storm water control measures incorporated into the project site design include vegetated swales, aggregate surfacing of facility areas, culvert inlet/outlet protection.

Appendix A
Construction Activity Record

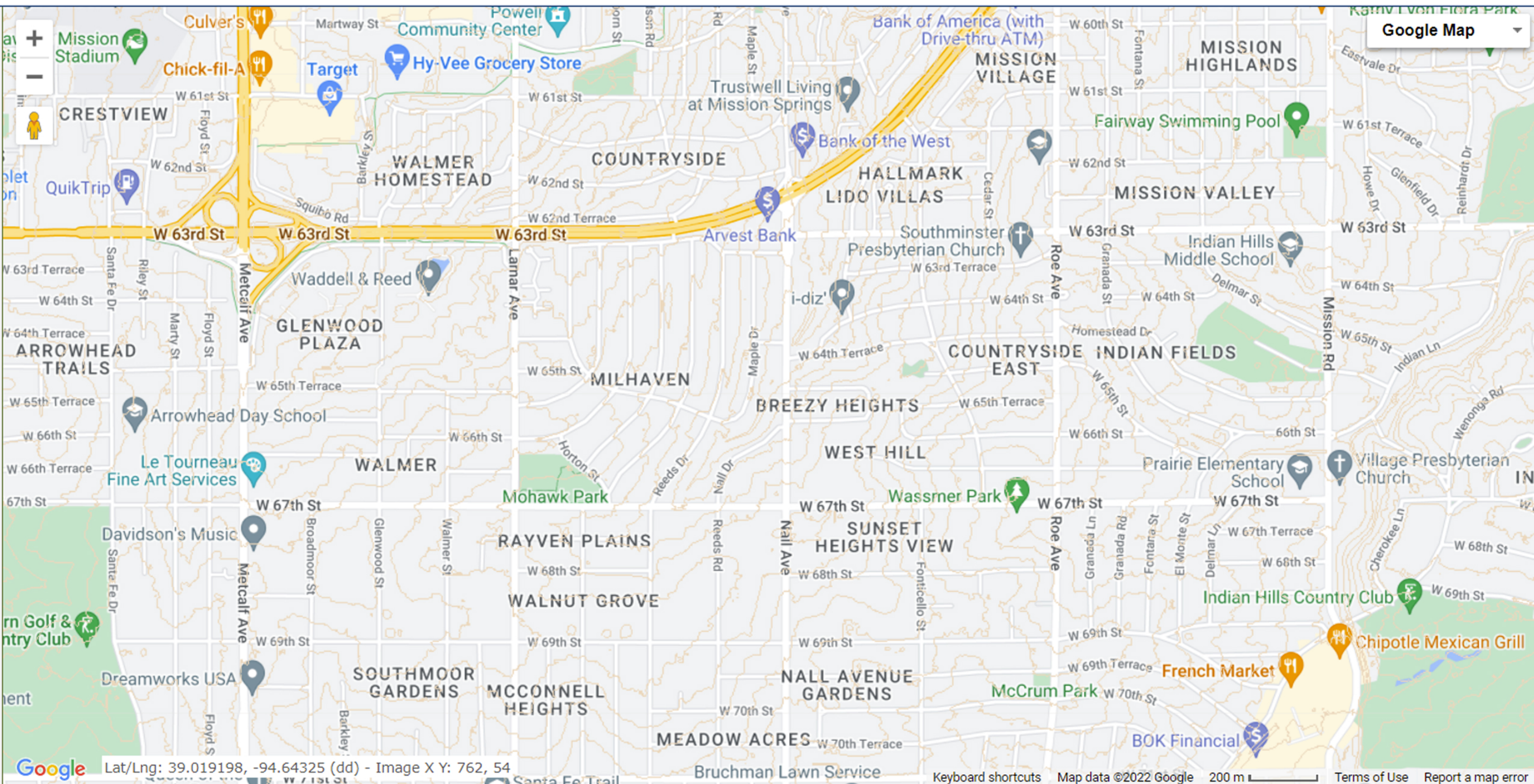
Appendix B
Completed Inspection Forms

SECTION 5

Location/Topographical Map(s), FIRM Maps & Soils Maps

This section contains:

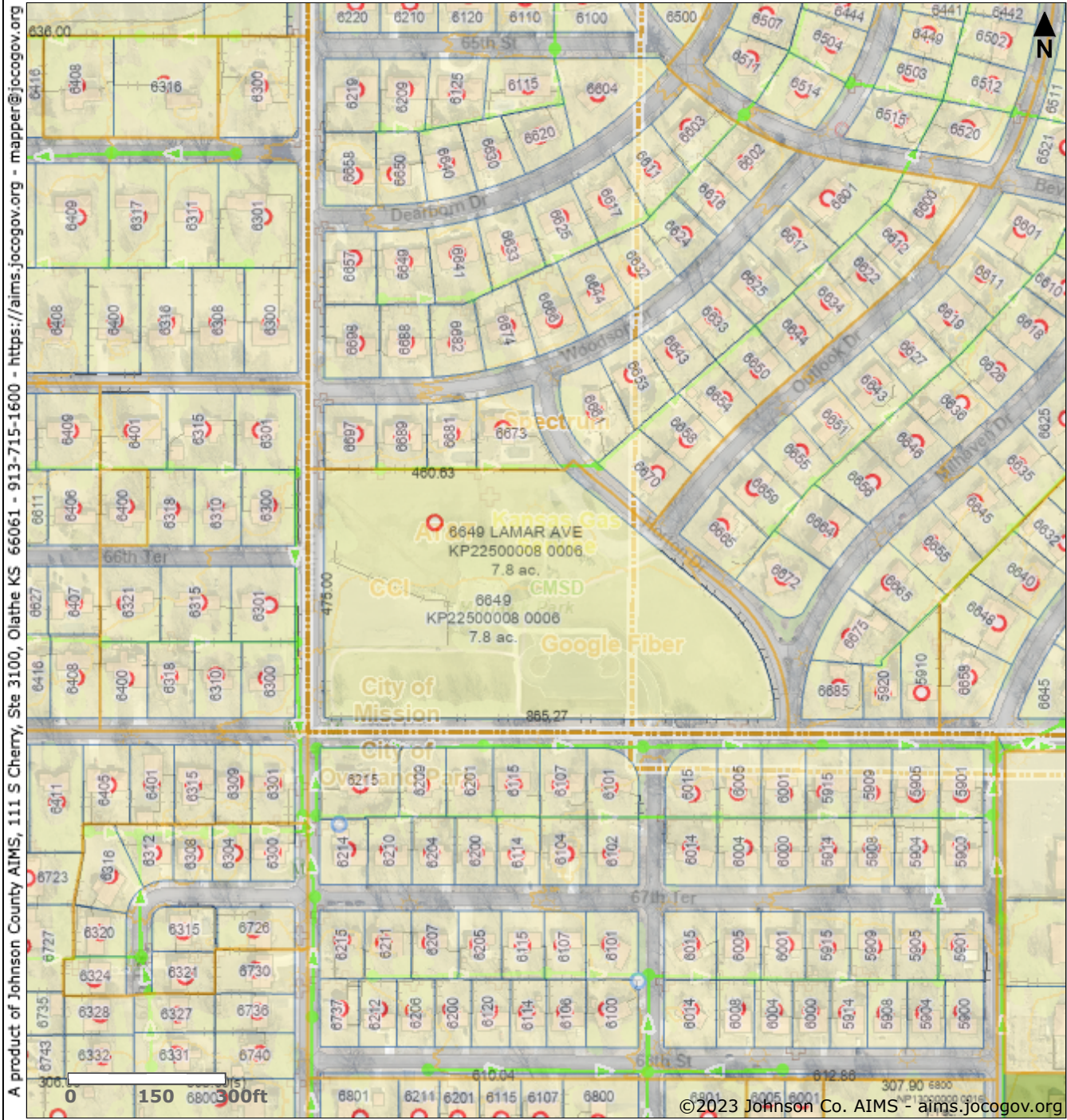
- Required Location, Vicinity and Topographical Maps (as needed)
- FIRM Maps
- Soils Maps if needed



Google Map

Lat/Lng: 39.019198, -94.64325 (dd) - Image X Y: 762, 54

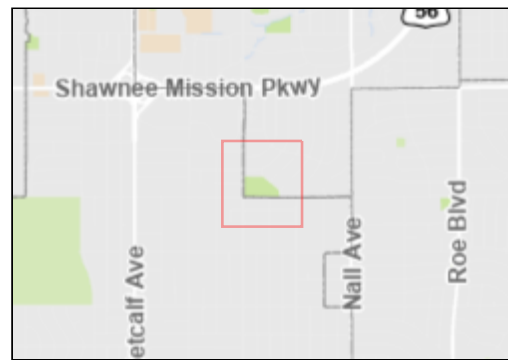
Keyboard shortcuts Map data ©2022 Google 200 m Terms of Use Report a map error



Johnson Co AIMS Map

LEGEND

- Address Point
- Address Point - Other
- Parcel Line**
 - Plat
 - Lot Line
 - Original Lot
- + Address Point
- Building/Structure
- Property**
 - Untaxed
 - Common Interest
 - Vertical
 - Platted
 - Unplatted
 - Right-of-way
 - Mineral Rights
 - Leased Land



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SITE PHOTOGRAPHS



SITE PHOTOS

Mohawk Park Phase 2 | Mission, KS

April, 2023

CONFLUENCE



SITE PHOTOS

Mohawk Park Phase 2 | Mission, KS

April, 2023

CONFLUENCE



SITE PHOTOS

Mohawk Park Phase 2 | Mission, KS

April, 2023

CONFLUENCE



SITE PHOTOS

Mohawk Park Phase 2 | Mission, KS

April, 2023

CONFLUENCE



SITE PHOTOS

Mohawk Park Phase 2 | Mission, KS

AUGUST, 2023

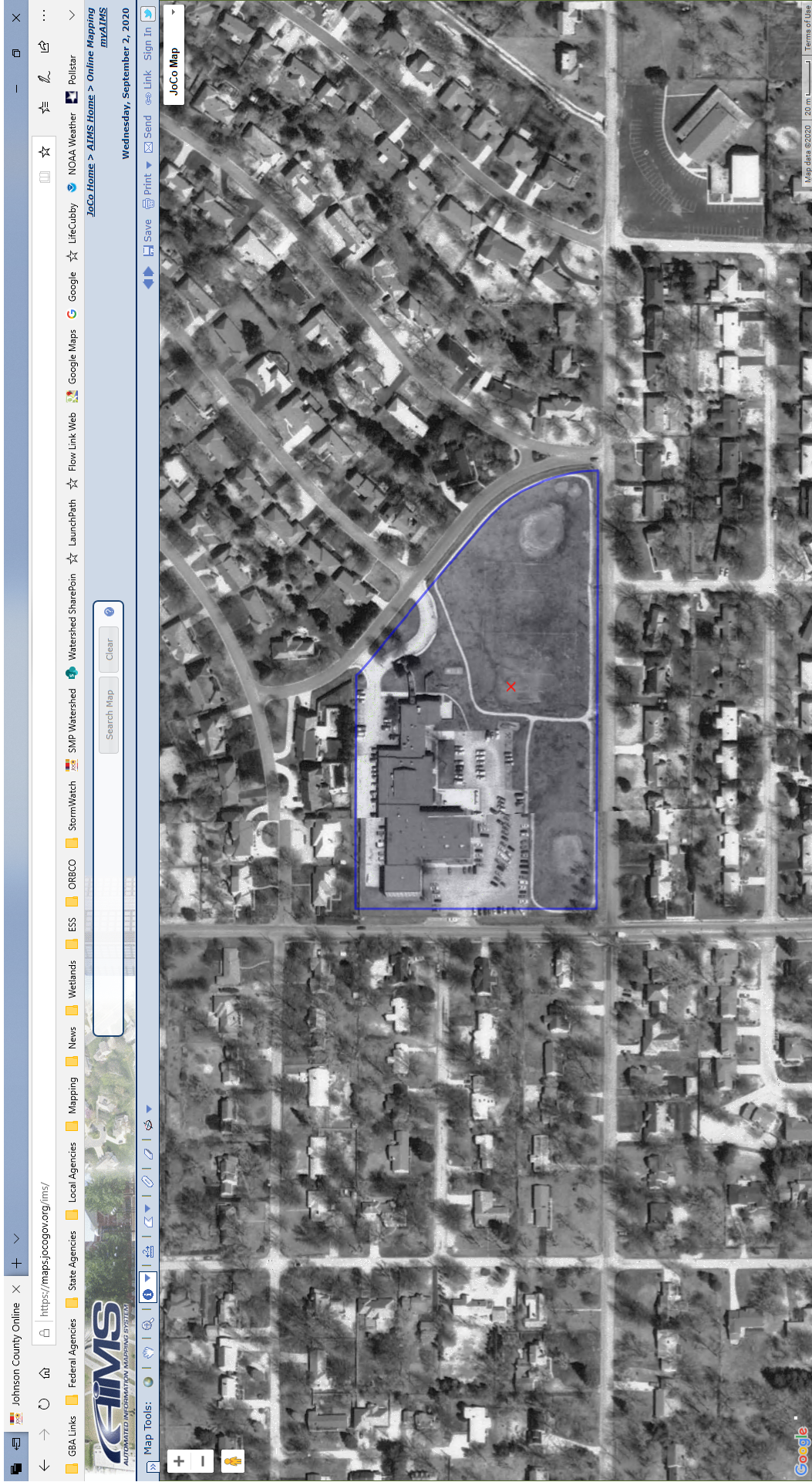
CONFLUENCE

EXHIBITS

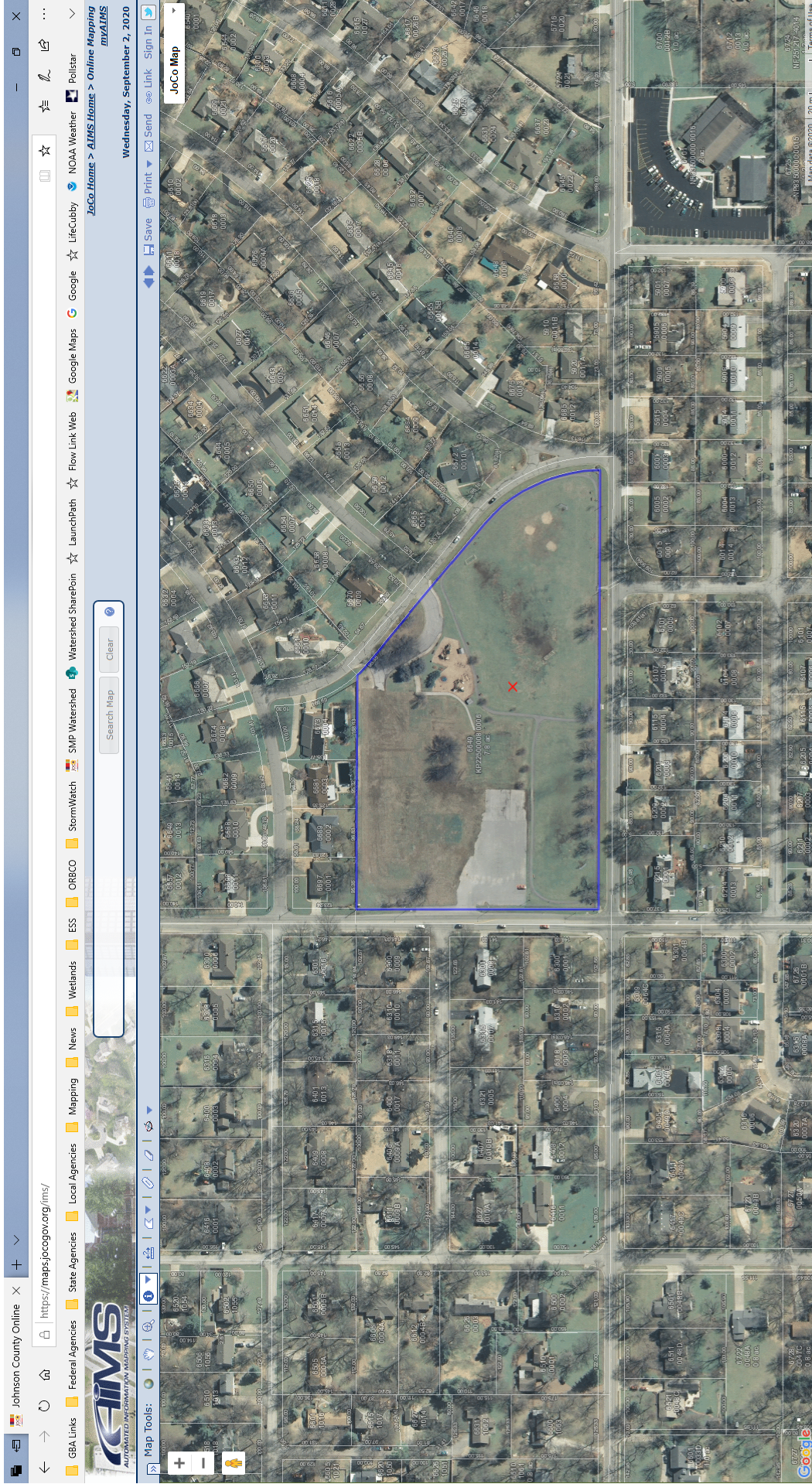
1954 Aerial Photograph (Pre-Development)

The screenshot displays a web-based GIS application interface. At the top, a browser address bar shows the URL <https://maps.jocopov.org/fms/>. Below the address bar is a navigation toolbar with icons for home, back, forward, search, and print. A sidebar on the left contains a search bar and a list of map layers and links, including: Johnson County Online, GBA Links, Federal Agencies, State Agencies, Local Agencies, Mapping, News, Wetlands, ESS, ORCO, StormWatch, SVP Watershed, Watershed SharePoint, LaunchPath, Google Maps, NOAA Weather, and Polstar. The main map area shows a 1954 aerial photograph with a parcel boundary highlighted in blue. The parcel is labeled with the number 6540 and the text "NP2222208 0006". A red 'X' is visible on the parcel. The map is overlaid with a grid of parcel boundaries and various numerical labels. At the bottom of the map, there is a scale bar and a north arrow. The browser's address bar also shows the date "Wednesday, September 2, 2020" and the page title "JoCo Home > AIMS Home > Online Mapping mVAIMS".

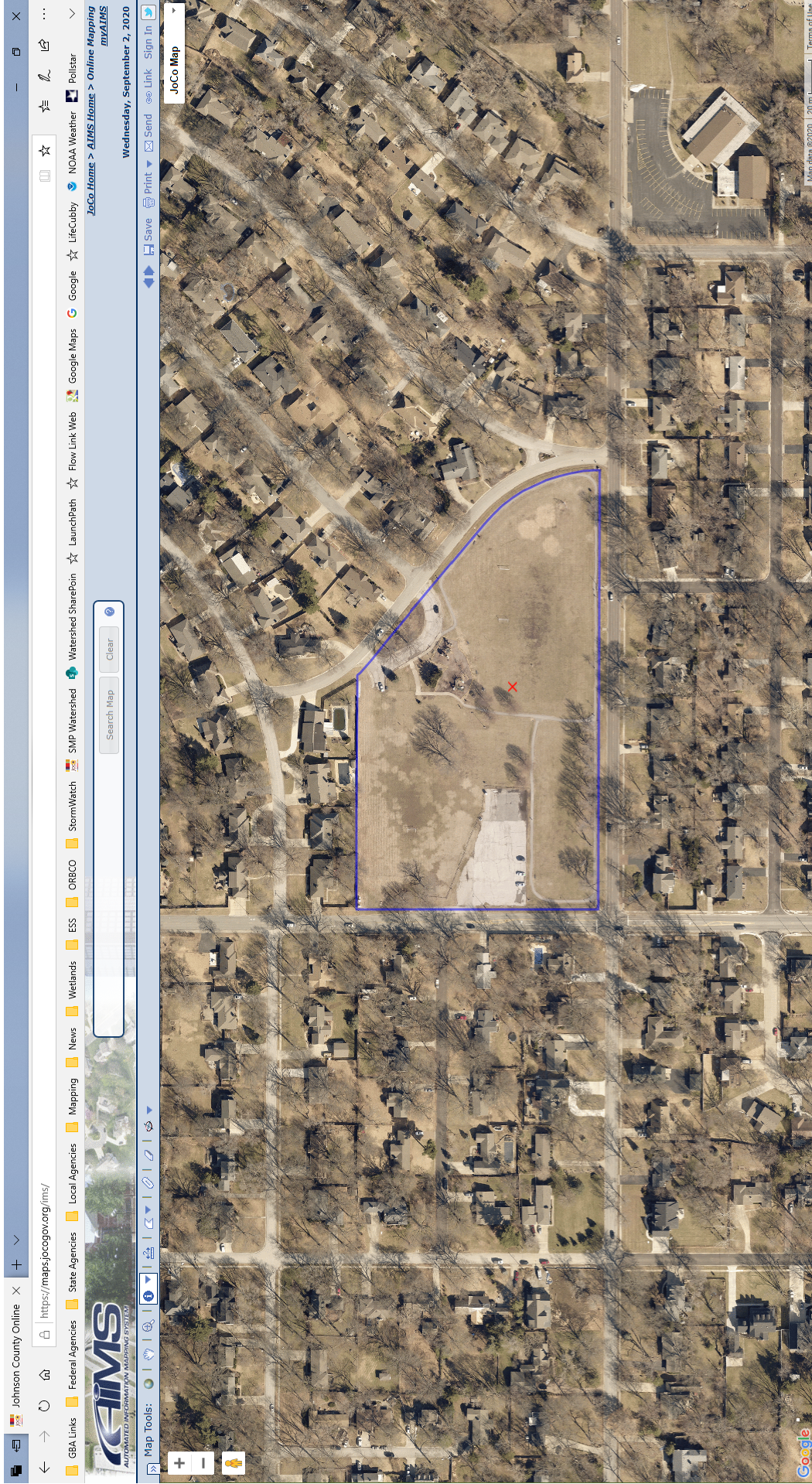
1986 Aerial Photograph (School Present)



2005 Aerial Photograph (School Demolished)



2019 Aerial Photograph (Current Mohawk Park)



Johnson County



Threatened and Endangered (T&E) Species

Critical Habitat Designated

STURGEON CHUB *Macrhybopsis gelida*

State: Threatened Federal: Candidate Critical Habitat: Yes

SHOAL CHUB *Macrhybopsis hyostoma*

State: Threatened Federal: N/A Critical Habitat: Yes

FLATHEAD CHUB *Platygobio gracilis*

State: Threatened Federal: N/A Critical Habitat: Yes

SILVER CHUB *Macrhybopsis storeriana*

State: Endangered Federal: N/A Critical Habitat: Yes

LEAST TERN *Sterna antillarum*

State: Endangered Federal: Endangered Critical Habitat: Yes

PIPING PLOVER *Charadrius melodus*

State: Threatened Federal: Threatened Critical Habitat: Yes

PLAINS MINNOW *Hybognathus placitus*

State: Threatened Federal: N/A Critical Habitat: Yes

No Critical Habitat Designated

PALLID STURGEON *Scaphirhynchus albus*

State: Endangered Federal: Endangered Critical Habitat: No

SICKLEFIN CHUB *Macrhybopsis meeki*

State: Endangered Federal: Candidate Critical Habitat: No

WESTERN SILVERY MINNOW *Hybognathus argyritis*

State: Threatened Federal: N/A Critical Habitat: No

TOPEKA SHINER *Notropis topeka*

State: Threatened Federal: Endangered Critical Habitat: No

SNOWY PLOVER *Charadrius alexandrinus*

State: Threatened Federal: N/A Critical Habitat: No

EASTERN SPOTTED SKUNK *Spilogale putorius*

State: Threatened Federal: N/A Critical Habitat: No

AMERICAN BURYING BEETLE *Nicrophorus americanus*

State: Endangered Federal: Endangered Critical Habitat: No

Species In Need of Conservation (SINC)

There are no SINC species with critical habitat in Johnson county

Prairie Mole Cricket *Gryllotalpa major*

State: SINC Federal: N/A Critical Habitat: No

River Shiner *Notropis blennioides*

State: SINC Federal: N/A Critical Habitat: No

Black Tern *Chlidonias niger*
State: SINC Federal: N/A Critical Habitat: No

Short-eared Owl *Asio flammeus*
State: SINC Federal: N/A Critical Habitat: No

Ferruginous Hawk *Buteo regalis*
State: SINC Federal: N/A Critical Habitat: No

Golden Eagle *Aquila chrysaetos*
State: SINC Federal: N/A Critical Habitat: No

Timber Rattlesnake *Crotalus horridus*
State: SINC Federal: N/A Critical Habitat: No

Tadpole Madtom *Norturus gyrinus*
State: SINC Federal: N/A Critical Habitat: No

Blue Sucker *Cycleptus elongatus*
State: SINC Federal: N/A Critical Habitat: No

Eastern Hognose Snake *Heterodon platirhinos*
State: SINC Federal: N/A Critical Habitat: No

Fawnsfoot Mussel *Truncilla donaciformis*
State: SINC Federal: N/A Critical Habitat: No

Common Shiner *Luxilus cornutus*
State: SINC Federal: N/A Critical Habitat: No

Johnny Darter *Etheostoma nigrum*
State: SINC Federal: N/A Critical Habitat: No

Bobolink *Dolichonyx oryzivorus*
State: SINC Federal: N/A Critical Habitat: No

Henslow's Sparrow *Ammodramus henslowii*
State: SINC Federal: N/A Critical Habitat: No

Yellow-throated Warbler *Setophaga dominica*
State: SINC Federal: N/A Critical Habitat: No

Cerulean Warbler *Setophaga cerulean*
State: SINC Federal: N/A Critical Habitat: No

Eastern Whip-poor-will *Antrostomas vociferus*
State: SINC Federal: N/A Critical Habitat: No

Fatmucket Mussel *Lampsilis siliquoidea*
State: SINC Federal: N/A Critical Habitat: No

CHESTNUT LAMPREY *Ichthyomyzon castaneus*
State: SINC Federal: N/A Critical Habitat: No

REDBELLY SNAKE *Storeria occipitomaculata*
State: SINC Federal: N/A Critical Habitat: No

SMOOTH EARTH SNAKE *Virginia valeriae*
State: SINC Federal: N/A Critical Habitat: No

Surficial Geology Kansas (Northeast Property)

Surficial Geology of Kansas *Kansas Geological Survey*

Legend

- Roads
- Administrative Boundaries
- Hydro
- Geology
- Hillshade
- Basemap

AI - Lansing Group

Description:
The Lansing consists of two limestone formations and an intervening shale formation. The Lansing forms an escarpment traced readily across eastern Kansas. In the southern part of the outcrop, limestone units thicken locally into limestone mounds or banks

Source(s):
Zeller, D. E., ed., 1968, The stratigraphic succession in Kansas: Kansas Geological Survey, Bulletin 189, 81 p.
Harbaugh, J. W., 1959, Marine bank development in Plattsburg Limestone (Pennsylvanian) Neodesha-Fredonia area, Kansas: Kansas Geological Survey, Bulletin 134, pt. 8, p. 291-331.

[Click for Glossary](#)

Zoom to

Surficial Geology Kansas (Central and Southwest Property)

The image shows a web-based GIS application interface. At the top, there is a navigation bar with various icons and a search bar. Below this is a legend panel with the following items:

- Roads
- Administrative Boundaries
- Hydro
- Geology
- Hillshade
- Basemap

The main map area displays a geologic map of Kansas. A yellow boundary outlines a specific area, and a red rectangle highlights a small section within it. A pop-up window titled "Q1 - Loess" is open over this area, providing the following information:

Description: Widespread, homogenous, commonly nonstratified, porous, friable, slightly coherent, usually highly calcareous, fine-grained blanket deposit (usually less than 30 m thick), consisting predominantly of silt with subordinate grain sizes ranging from clay to

Source(s): Neuvendorf, K. K. E., Mehl, J. P., Jr., and Jackson, J. A., 2011, Glossary of Geology, 5th Edition, Revised: Alexandria, Virginia, American Geological Institute, 783 p.

[Click for Glossary](#)

At the bottom of the map, there are scale bars indicating 0.2 km and 0.3 mi.

Kansas Water Wells

[KGS--Water Resources](#) | [Map of WWCS Wells](#) | [Map of Oil and Gas Data in Johnson County Online Map](#)

[GSA Links](#) | [Federal Agencies](#) | [State Agencies](#) | [Local Agencies](#) | [Mapping](#) | [News](#) | [Wetlands](#) | [ESS](#) | [ORSCO](#) | [StormWatch](#) | [SMP Watershed](#) | [Watershed SharePoint](#) | [LaunchPath](#) | [Flow Link Web](#) | [Google](#) | [LifeCubby](#) | [NOAA Weather](#) | [Polstar](#)

[Display](#) | [Go To](#) | [Tools](#) | [Links/Legend](#)

Display*

- WWCS Water Wells
- Counties
- Section-Township-Range < 1:100% >
- Groundwater Mgmt Dist < 1:100% >
- KS Outline
- ▾ Aquifers
- Topography < 1:100% >
- ▾ Aerials
- Base Map

* Some layers only visible when zoomed in. Layers draw on top of one another in the order listed.

Kansas Water Wells (WWCS) *Kansas Geological Survey*
39.01320, -94.65273 (wvcs94)

Bay, Mike - Constructed

Owner:	Bay, Mike
Use:	Heat Pump (Closed Loop/Disposal), Geothermal
Status:	Constructed
Well ID:	
Depth (ft):	255
Static Water Level (ft):	
Estimated Yield (gpm):	
Elevation (ft):	
Completion Date:	09/05/2009
Driller:	Associated Drilling, Inc.
DWR Number:	
KGS Record Number:	432163
County:	Johnson
Section:	T12S R25E Sec 17
Quarter Section:	SE NW NE
Latitude, Longitude (NAD27):	39.011292, -94.65543
Well Location	

Kansas Oil and Gas Wells

[KGS--Water Resources](#)
[Map of Oil and Gas Dat.](#)
[Johnson County Online Map](#)

[GSA Links](#)
[Federal Agencies](#)
[State Agencies](#)
[Local Agencies](#)
[Mapping](#)
[News](#)
[Wetlands](#)
[ESS](#)
[ORBCO](#)
[SMP Watershed](#)
[Watershed SharePoint](#)
[LaunchPath](#)
[Flow Link Web](#)
[Google Maps](#)
[LifeCubby](#)
[NOAA Weather](#)
[Pollstar](#)

Map of Oil and Gas Wells
39.04153, -94.65254 (WCS94)
Kansas Oil and Gas *Kansas Geological Survey*

Oil and Gas Wells
 WWCWS Water Wells
 Counties
 Leases
 Section-Township-Range
 Waterflood
 Oil and Gas Fields
 LPC Habitat
 KS Outline
 Topography
 Aerials
 Base Map

* Some layers only visible when zoomed in. Layers draw on top of one another in the order listed.

WELL - Vara 1 15-091-20604	
API:	15-091-20604
Lease:	Vara
Well:	1
Well Type:	GAS
Status:	Approved Intent to Drill
Original Operator:	BOB VARA
Current Operator:	
Field Name:	T12S R24E Sec 13, NW NW
Location:	5E
Footages:	
Latitude, Longitude (NAD27):	39.006739, -94.694372
Well Location	
Source:	QUARTER_CALLS
County:	Johnson
Permit Date:	02/16/1982
Spud Date:	
Completion Date:	
Plug Date:	
Total Depth:	Null
Elevation:	

National Pipeline Mapping System

Johnson County Online <https://maps.jocogov.org/fims/?z=11&ll=-38.897576,-94.731013&op=0.5&bm=3>

[GSA Links](#)
[Federal Agencies](#)
[State Agencies](#)
[Local Agencies](#)
[Mapping](#)
[News](#)
[Wetlands](#)
[ESS](#)
[OR8CO](#)
[StormWatch](#)
[SMP Watershed](#)
[Watershed SharePoint](#)
[LaunchPath](#)
[Flow Link Web](#)
[Google Maps](#)
[LifeCubby](#)
[NOAA Weather](#)
[Polstar](#)

[mVAIMS](#)
 Automated Information Mapping System

[Search Map](#) [Clear](#)

[Map Tools](#)
[+](#)
[-](#)
[Home](#)
[Layers](#)
[Print](#)
[Send](#)
[Link](#)
[Sign Out](#)

Parcels
 Address Points
 Landuse
 Zoning
 Parcel Outlines
 Flood Zone
 Planimetrics
 School Layers
 Admin Layers
 Other
 Utilities

Show Services for Extent
 Infrastructure - [Toggle Selection](#)

Electric
 Gas
 Sewer
 Cable
 Fiber
 Water
 Stormwater
 Telecom/Wireless
 Septic Permits
 KDHE Tanks
 KGS Water Well
 Pipeline

NPMS Pipe
 Gas - Abandoned/Retired
 Gas - In Service
 Liquid

Easements & Setbacks
 Capital Improvements
 Service Areas - [Toggle Selection](#)
 Monuments/Section Corners

Layer Transparency: 100% 50% 0%

AIMS Imagery
 Image History: 1941 2019
Mapbox Attribution

Identify Results
NPMS Pipe - 234
[Show Part To](#)

National Pipeline Mapping System
CUE Provider 06/10/2015
CUE Date Rec'd SOUTHERN STAR CENTRAL GAS
OperatorName PIPELINE, INC
Commodity Natural Gas
Diameter (in.) 0.00
PipeType GAS
Quality Excellent, within 50 feet
Status In Service
Sub Date 20140313
Subys Name SOUTHERN STAR CENTRAL GAS
Sys Name PIPELINE, INC.

Map Scale: 20 m
 Map Date: 8/20/20

KDHE Environmental Interest Finder

<https://maps.kdhe.state.ks.us/ksif/>

[GMA Links](#)
[Federal Agencies](#)
[State Agencies](#)
[Local Agencies](#)
[LifeCubby](#)
[NOAA Weather](#)
[Polstar](#)

[Google Maps](#)
[Flow Link Web](#)
[LaunchPath](#)
[Watershed SharePoint](#)
[SMP Watershed](#)
[StormWatch](#)
[ORBCO](#)
[ESS](#)
[Wetlands](#)
[News](#)
[Mapping](#)

KDHE Environmental Interest Finder
 Enter address in search box or Zoom into map to list KDHE Points of Interest in your map area.

LEGEND

- ISL: Identified Sites List
- TRI: Toxic Release Inventory
- Spills
- LUST: Leaking Underground Storage Tanks
- Air Quality
- UIC: Underground Injection Wells - I & II
- WWW: Waste Water
- SWR: Stormwater Runoff
- Dry Cleaners
- Tanks Above and Underground Storage Tanks
- RTK: Right-to-Know
- RCRA: Resource Conservation and Recovery Act
- Solid Waste/Landfills/ Dumps

All symbolized points in the legend may not be visible in the map extent.

Excluded programs:

- PWS: Public Water Supply Facility
- UIC - Class V Wells

Map Contents and Descriptions

Check to turn on/off Environmental Interest Point

- Contaminated
- ISL: Identified Sites List
- TRI: Toxic Release Inventory
- Spills
- LUST: Leaking Underground S
- Regulated
- Air Quality

1 km
 0.5 miles
 Mohawk Park

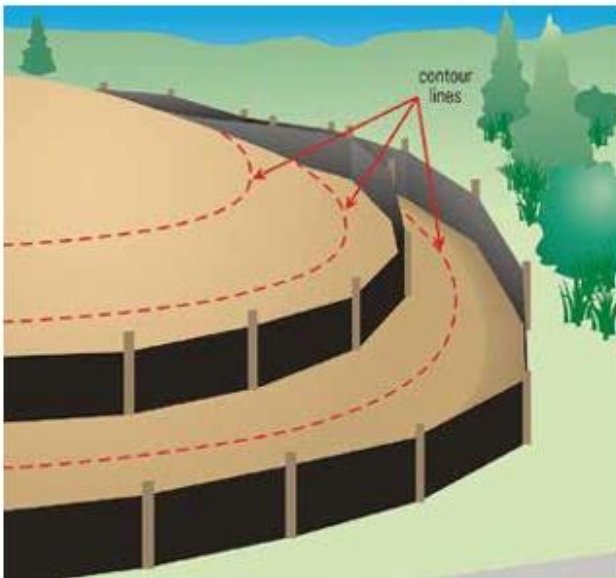
Using Silt Fence and Other Sediment Barriers

The use of silt fences and other sediment barriers involves simple observation and common sense. However, as Will Rogers once noted, "common sense ain't so common." The following summary provides details on how to install sediment barriers.

Sediment barrier placement

Sediment barriers are required below (downhill from) areas of bare soil. Hay or straw bales must not be used as sediment barriers due to their inherent weakness and tendency to fall apart. There are several factors to consider in placing silt fences or other commercial sediment barriers:

- Place barriers on downhill edge of bare soil areas.
- Make sure the barrier catches all the muddy runoff.
- The goal is to pond runoff and allow sediment to settle out.
- Install multiple sediment barriers on long slopes.
- Spacing on long slopes is every 60 to 100 feet and dependent on site conditions. Consult engineered plans for exact spacing.
- Put barriers across slopes, on the contour (level).



Silt fences should be installed on the contour below bare soil areas. Use multiple fences on long slopes. Consult engineering plans for spacing. Remove accumulated sediment before it reaches halfway up the fence.



Use of a designated concrete washout is required. Wastewater from other activities (stucco, drywall and paint) also needs to be properly disposed of.

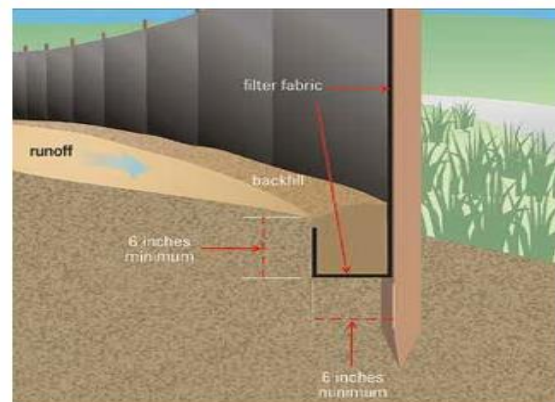
Silt fence installation

Each 100-foot section of silt fence can control runoff from about ¼ acre (about 110 feet uphill). To install a silt fence correctly, follow these steps:

- Note the location & extent of the bare soil area.
- Mark silt fence location just below bare soil area.
- Make sure fence will catch all flows from area and ends are turned uphill ("J hook").
- Dig trench 6 inches deep across slope.
- Unroll silt fence along trench.
- Join fencing by rolling the end stakes together.
- Make sure stakes are on downhill side of fence.
- Drive stakes in against downhill side of trench.
- Drive stakes until a minimum of 6 inches of fabric is in trench.
- Push fabric into trench; spread along bottom.
- Fill trench with soil and tamp down.
- Securely attach fence to stakes.

Silt fencing should not be installed:

- Up and down hills.
- Above (uphill from) areas of bare soil.
- In ditches, channels, or streams.



Remember: stakes go on the downhill side. Dig trench first, install fence in downhill side of trench, tuck fabric into trench, then backfill on the uphill side (the side toward the bare soil area).

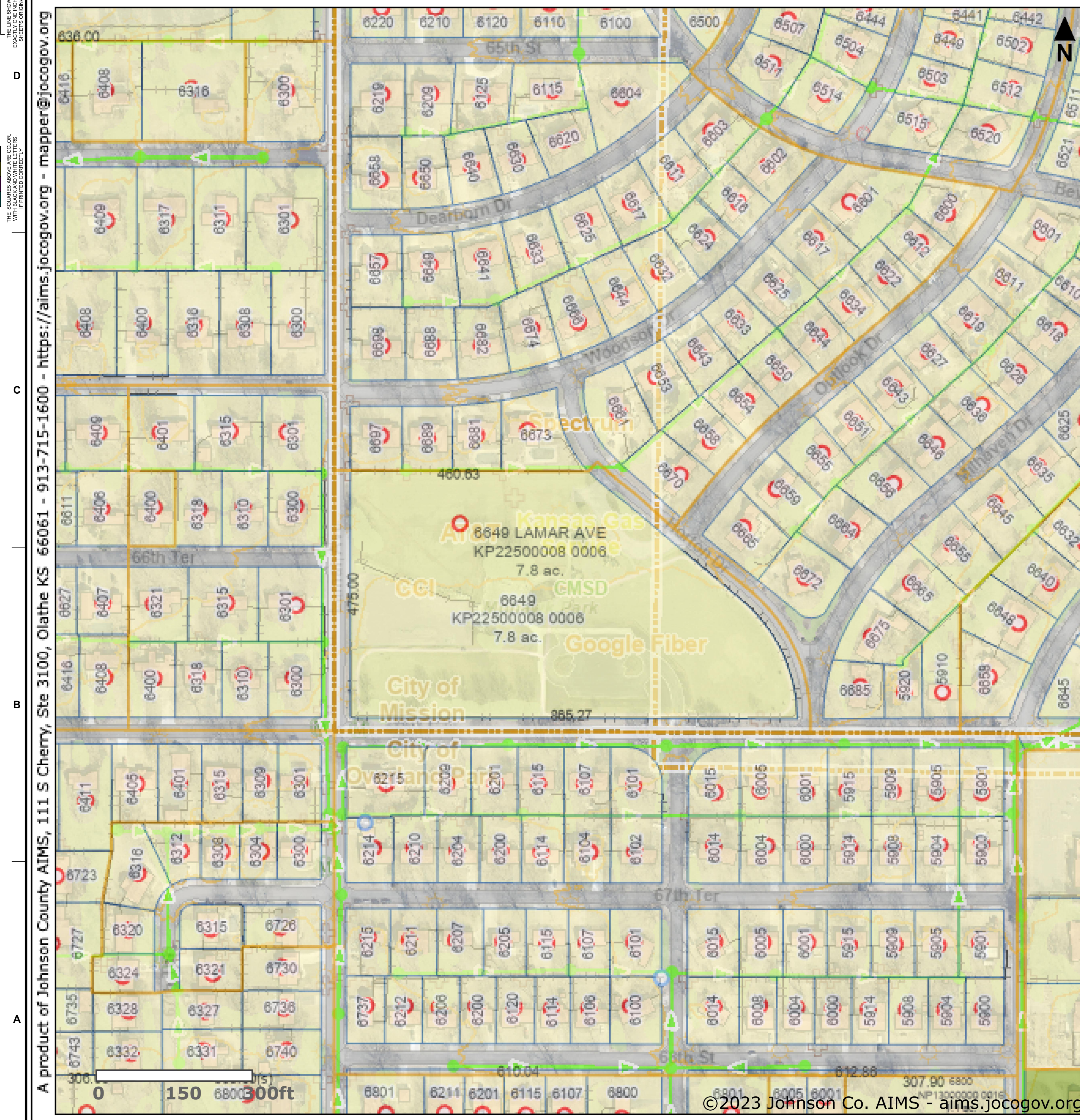
SECTION 6

BMP Tracking Map & Land Disturbance Tracking Log

This section contains:

- Erosion and Sediment Control Plan sheet excerpts
- Post Construction Stormwater Management Plan sheets if applicable
- BMP Tracking Map (Working SWPPP Map)
 - Record of Land Disturbance, Stabilization and BMP installation and removal
 - Record of Dewatering Activities (e.g. dates and estimated volume of water discharged)
- Individual Lot Certifications will be located here as needed

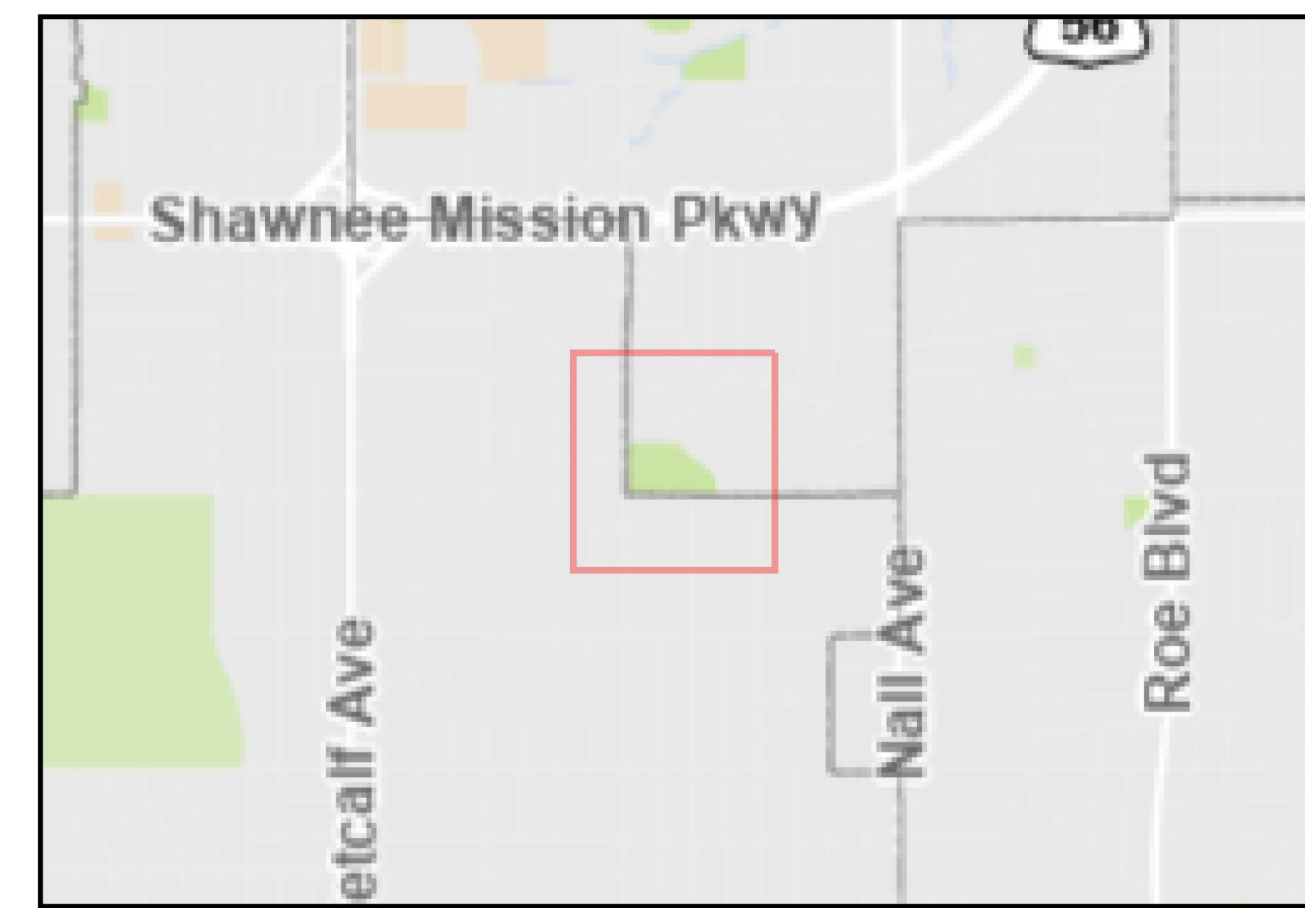
THE LINE SHOWN ABOVE IS
 EITHER A PLAT OR LOT LINE
 OR A COMBINATION THEREOF.
 THE SQUARES ABOVE ARE COLOR
 CODED TO INDICATE PROPERTY
 TYPE. SEE LEGEND FOR
 DEFINITIONS.
 IF PROVIDED CORRECTLY,
 THIS INFORMATION IS
 INTENDED TO BE USED
 AS A REFERENCE ONLY.
 IT IS NOT A WARRANTY
 OF ANY KIND.
 © 2023 JOHNSON COUNTY
 GIS & MAPPING



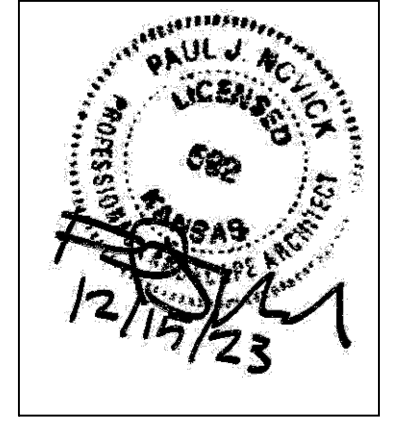
Johnson Co AIMS Map

LEGEND

- Address Point
- Address Point - Other
- Parcel Line
 - Plat
 - Lot Line
 - Original Lot
- + Address Point
- Building/Structure
- Property
 - Untaxed
 - Common Interest
 - Vertical
 - Platted
 - Unplatted
 - Right-of-way
 - Mineral Rights
 - Leased Land



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MOHAWK PARK PHASE 2

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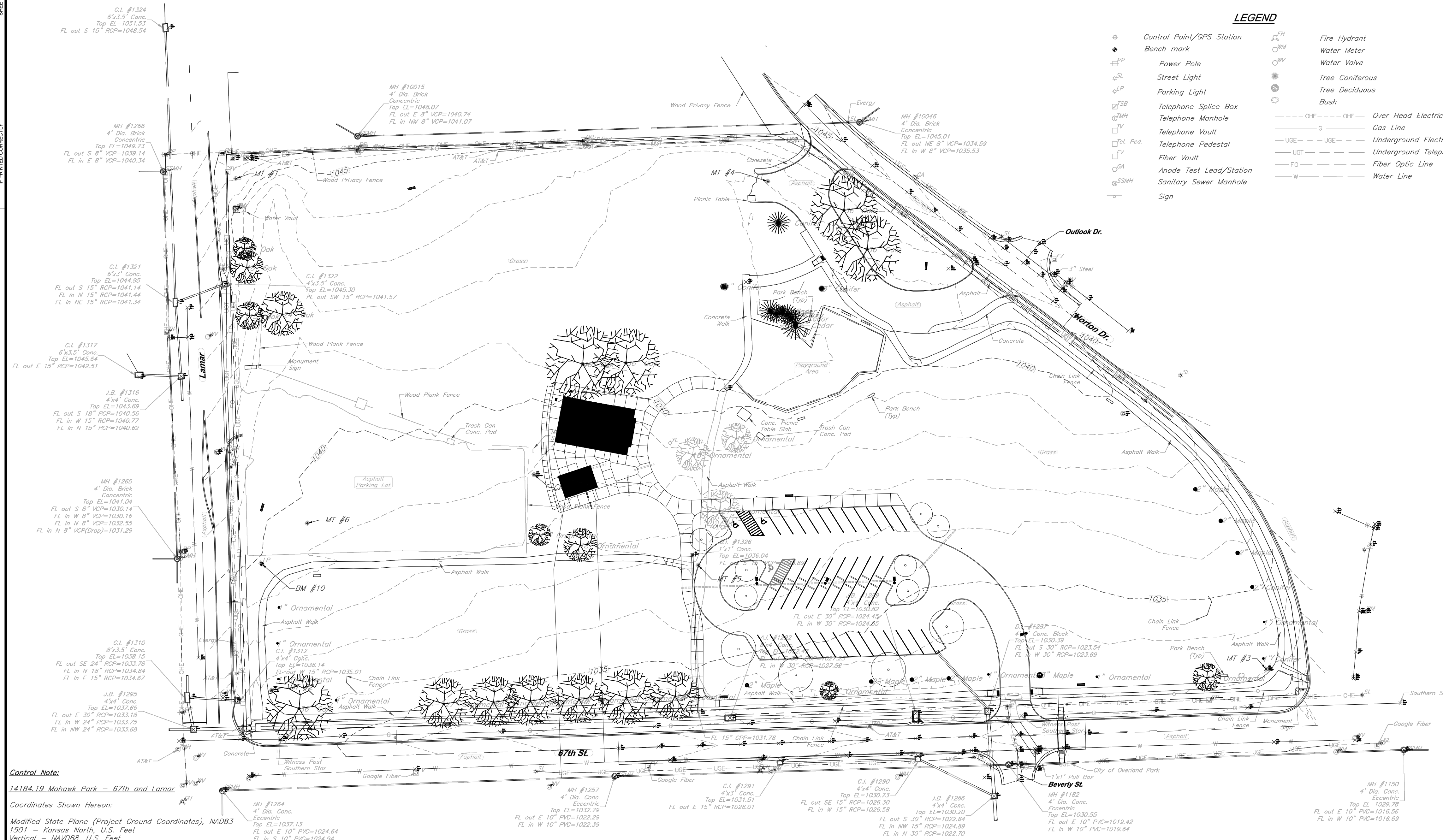
THE LINE SHOWN ABOVE IS THE ORIGINAL SIZE OF THE SHEET. THE SQUARES ABOVE ARE COLOR MATCHES TO THE ORIGINAL SIZE. IF PRINTED CORRECTLY, THE SQUARES SHOULD BE SQUARES.

D

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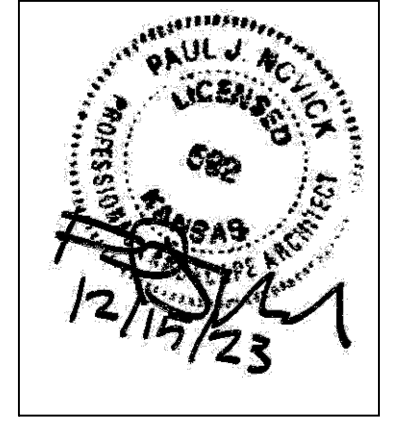


LEGEND

- Control Point/GPS Station
- ◆ Bench mark
- ⊕ Power Pole
- ⊙ Street Light
- ⊙ Parking Light
- ⊕ Telephone Splice Box
- ⊕ Telephone Manhole
- ⊕ Telephone Vault
- ⊕ Telephone Pedestal
- ⊕ Fiber Vault
- ⊕ Anode Test Lead/Station
- ⊕ Sanitary Sewer Manhole
- ⊕ Sign
- ⊕ Fire Hydrant
- ⊕ Water Meter
- ⊕ Water Valve
- ⊕ Tree Coniferous
- ⊕ Tree Deciduous
- ⊕ Bush
- OHE --- OHE --- Over Head Electric
- G --- G --- Gas Line
- UGE --- UGE --- Underground Electric
- UGT --- UGT --- Underground Telephone
- FO --- FO --- Fiber Optic Line
- W --- W --- Water Line

Control Note:
 14184.19 Mohawk Park - 67th and Lamar
 Coordinates Shown Hereon:
 Modified State Plane (Project Ground Coordinates), NAD83
 1501 - Kansas North, U.S. Feet
 Vertical - NAVD83, U.S. Feet
 CAF = 0.9999211
 To get to State Plane:
 Coordinates x CAF = State Plane
 OP #100 - Set 1/2" bar Near the Northeast Corner of Parking Lot of Mohawk Park
 Ties:
 1. 23.09 feet North Northwest of Duplex Nail Top of Centerline of Wood Plank Fence Corner Post
 2. 5.50 feet West Southwest of Duplex Nail Top of Centerline of Wood Plank Fence Corner Post
 3. 8.45 feet West of East Edge of Asphalt Parking Lot
 Coordinates:
 N: 263367.175
 E: 2262139.538
 EL: 1038.653
 BM #10 - Set chiseled "x" cut Top Southeast of Corner Concrete, Base of Parking Light Pole at Southwest Corner of the West Parking Lot of Mohawk Park
 Coordinates:
 N: 263293.318
 E: 2261915.234
 EL: 1041.201
 MT #1 - Found 1/2" bar set at Northwest of Corner Property of Mohawk Park
 Ties:
 1. 22.10 feet Northeast of Top Southeast Corner of most East Concrete Base of AT&T Splice Boxes
 2. 14.29 feet North of Top Southeast Corner of most West Concrete Base of AT&T Splice Boxes
 3. 5.84 feet West Northwest of Top Southeast Corner of most Southwest AT&T Telephone Vault
 4. 28.30 feet South of Top Southeast Corner of Water Vault
 Coordinates:
 N: 263611.339
 E: 2261893.430
 EL: 1047.214

MT #2 - Found 1/2" bar set Near the Southwest Corner of Park Property, Northeast Corner of Intersection of 67th and Lamar
 Ties:
 1. 10.67 feet Northeast Near side of 1" Tree
 2. 2.90 feet West of East Edge of Asphalt Walk
 3. 25.57 feet South Southwest of Centerline of Gatepost at Walk
 Coordinates:
 N: 263189.127
 E: 2261923.166
 EL: 1036.748
 MT #3 - Found 1/2" bar set at Southeast Corner of Park Property, Northwest Corner of Intersection of 67th and Worton Drive
 Ties:
 1. 9.08 feet North Northwest Near side of 1" Cedar Tree
 2. 4.39 feet East of West Edge of Asphalt Walk
 3. 23.27 feet East of Centerline of North most Chainlink Gate post
 4. 52.00 feet East of Centerline of Worton Drive
 Coordinates:
 N: 263206.836
 E: 2262743.403
 EL: 1033.139
 MT #4 - Found Mag and Shiner set at Northwest Corner of the East Parking Lot of Mohawk Park
 Ties:
 1. 11.15 feet Northwest of Back of Curb at End of Concrete Walk
 2. 10.50 feet West of West Edge of Asphalt Parking Lot
 3. 75.00 feet East of Centerline of Worton Drive
 Coordinates:
 N: 263608.993
 E: 2262332.634
 EL: 1040.876



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SURVEY

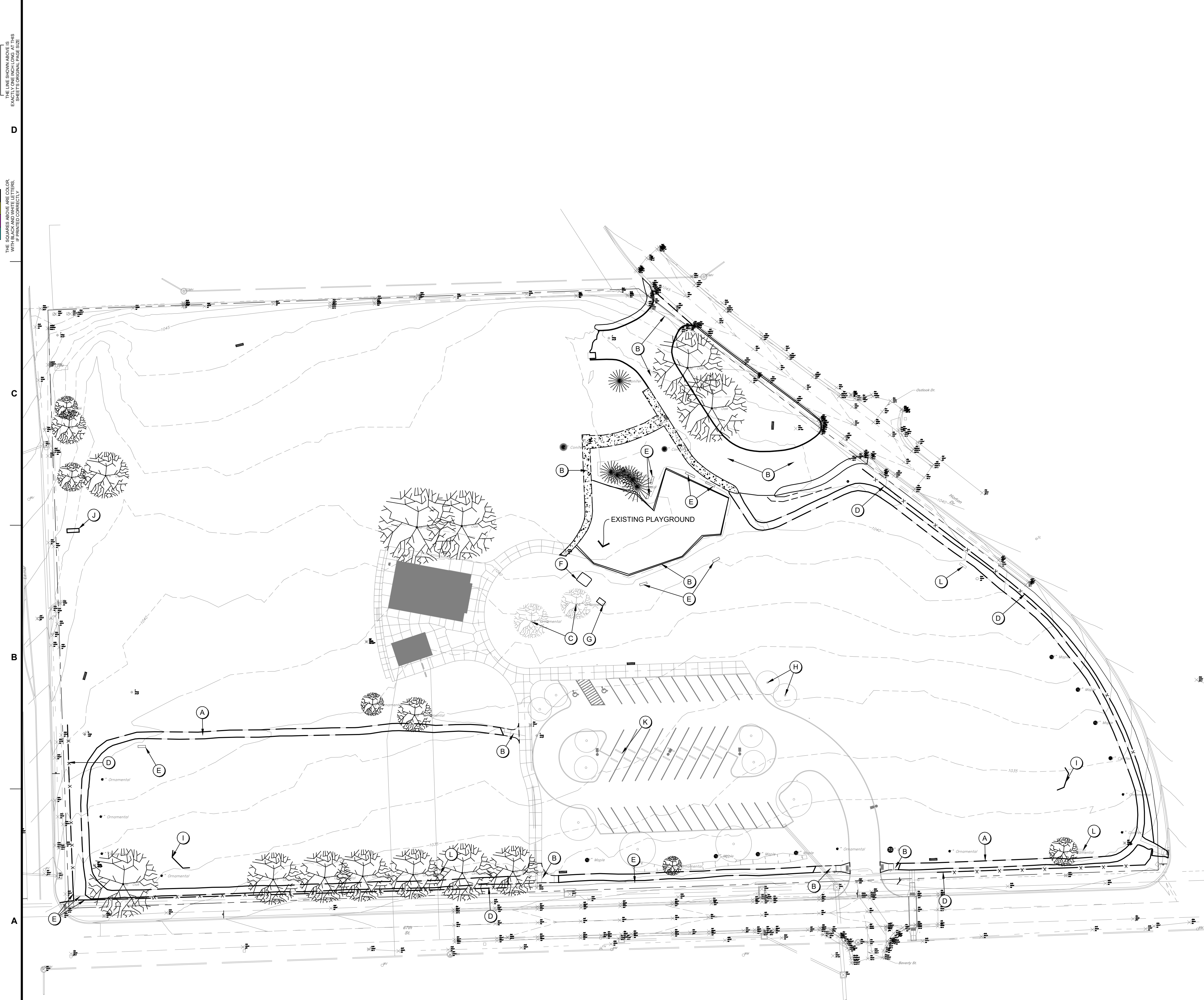
SP100

01 SURVEY



THE LINE SHOWN ABOVE IS
 EITHER A CENTERLINE OR
 SHEET'S ORIGINAL PLAGE SIZE

THE SQUARES ABOVE ARE COLOR
 WITH THE CORRESPONDING LETTER.
 IF PRINTED CORRECTLY



DEMOLITION GENERAL NOTES

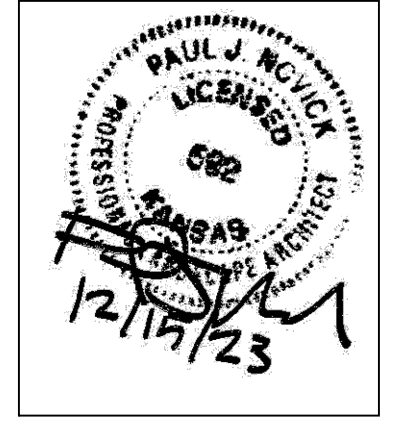
- A. PRIOR TO ANY EXCAVATION AT THE SITE, CONTRACTOR SHALL CONSULT WITH OWNER'S PERSONNEL AND UTILITY COMPANIES REPRESENTATIVES TO DETERMINE POSSIBLE UTILITY LOCATIONS AND DEPTHS. NO COMPENSATION WILL BE ALLOWED FOR DAMAGE RESULTING FROM FAILURE TO COMPLY WITH THIS REQUIREMENT. REPORT ANY DAMAGE TO EXISTING UTILITIES PRIOR TO REPAIR. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER OF THE UTILITY.
- B. FIELD VERIFY EXISTING GRADES AND LOCATIONS OF EXISTING UTILITIES, CONDUIT, LINES, POLES, TREES, PAVING, BUILDING AND OTHER SITE STRUCTURES PRIOR TO DEMOLITION OR CONSTRUCTION AND IMMEDIATELY INFORM THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. THE CONTRACTOR SHALL REPORT TO THE OWNER ANY DAMAGE TO OWNER'S PROPERTY PRIOR TO REPAIR.
- C. PROTECT ALL ITEMS WITHIN CONTRACT LIMITS NOT INDICATED TO BE REMOVED. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.
- D. CONTACT THE LANDSCAPE ARCHITECT PRIOR TO REMOVING ANY PLANT MATERIAL NOT INDICATED TO BE PROTECTED OR REMOVED.
- E. CONTRACTOR TO PROVIDE ADEQUATE BARRICADES AND TRAFFIC CONTROL. COMPLY WITH REQUIREMENTS OF LOCAL JURISDICTION.
- F. CONTRACTOR SHALL SAW CUT ALL ASPHALT OR CONCRETE TO BE REMOVED TO THE NEAREST CONTROL JOINT WHERE PRACTICAL.
- G. PROTECT ALL ITEMS WITHIN CONTRACT LIMITS NOT INDICATED TO BE REMOVED. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES.

KEYNOTES

- A. REMOVE EXISTING ASPHALT PATH
- B. REMOVE EXISTING CONCRETE SIDEWALK AND CURB
- C. REMOVE EXISTING VEGETATION
- D. REMOVE EXISTING FENCE
- E. REMOVE AND PRESERVE BENCHES (7)
- F. REMOVE AND PRESERVE TABLE SHADE STRUCTURE
- G. REMOVE TRASH BINS
- H. PRESERVE AND RELOCATE EXISTING TREES
- I. REMOVE BACKSTOP
- J. EXISTING MONUMENT SIGNAGE TO REMAIN
- K. REMOVE EXISTING PARKING BLOCK
- L. EXISTING BENCH TO REMAIN (3)



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DEMOLITION PLAN

SP101

01 SP101 DEMOLITION PLAN



THE LINE SHOWN ABOVE IS WITH THE ORIGINAL SCALE SIZE

D

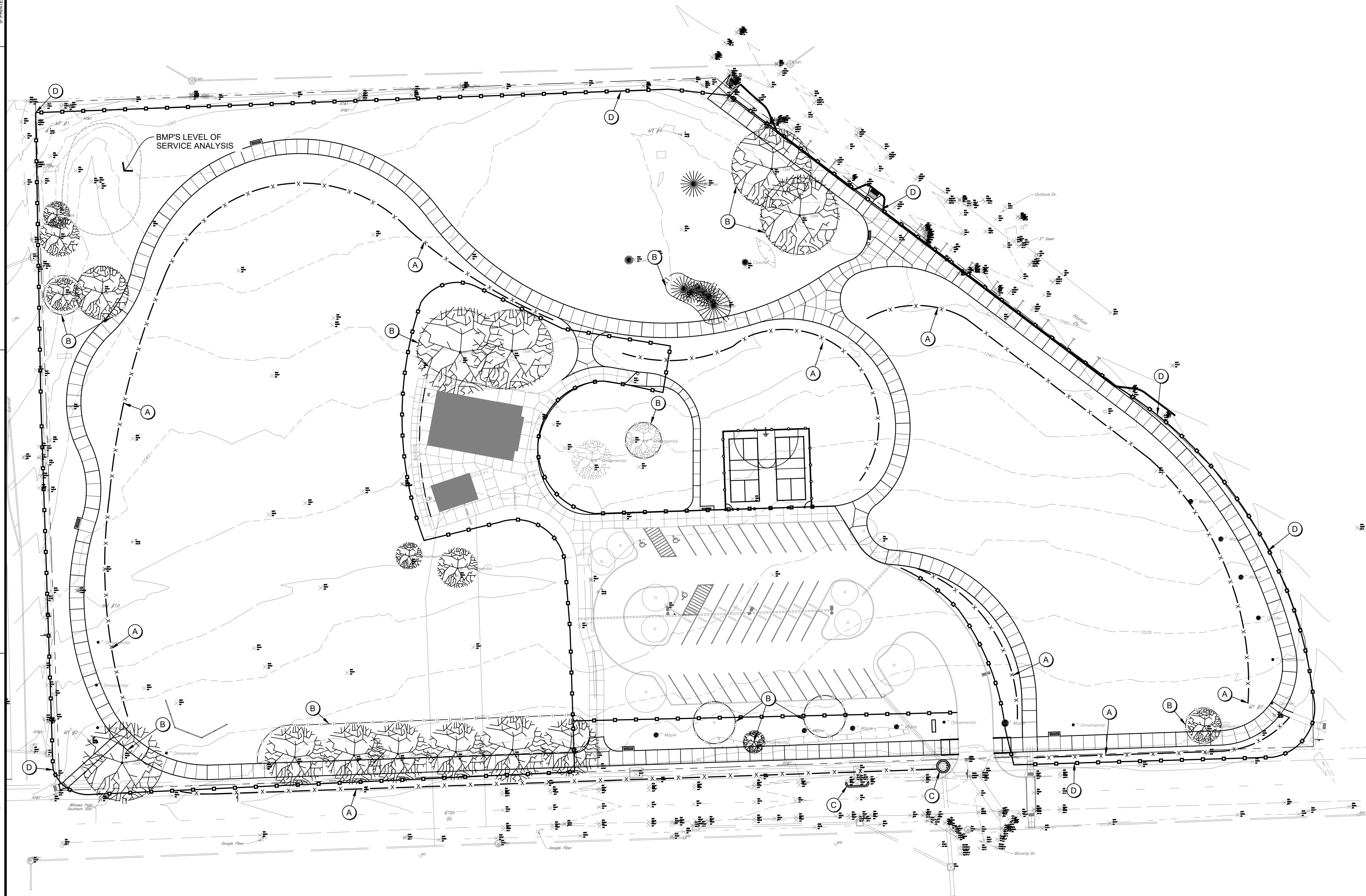
THE SQUARES ABOVE ARE COLOR WITH THE ORIGINAL SCALE SIZE IF PRINTED CORRECTLY

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EROSION CONTROL GENERAL NOTES

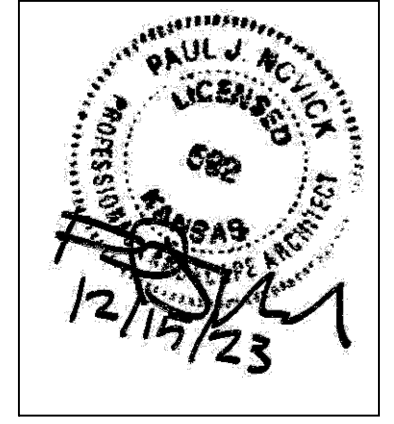
- A. POTENTIAL SOURCES OF POLLUTION: SITE SOURCES OF POLLUTION GENERATED AS A RESULT OF THIS PROJECT RELATED TO SILTS AND SEDIMENT AND OTHER MATERIALS WHICH MAY BE TRANSPORTED AS A RESULT OF A STORM EVENT FROM THE CONSTRUCTION SITE.
- B. RESPONSIBILITY: THIS POLLUTION PREVENTION PLAN ILLUSTRATES GENERAL MEASURES TO BE TAKEN FOR COMPLIANCE WITH THE PERMIT. ALL MITIGATION MEASURES REQUIRED, AS A RESULT OF ACTIVITIES, ARE THE RESPONSIBILITY OF THE CONTRACTOR SHALL TAKE ALL ACTIONS NECESSARY FOR INSTALLATION OF CONTROL MEASURES FOR COMPLIANCE WITH PERMIT REQUIREMENTS.
- C. CONTROLS: THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND FULFILLING ALL THE REQUIREMENTS OF THE GENERAL PERMIT INCLUDING BUT NOT LIMITED TO, THE FOLLOWING:
- D. THE CONTRACTOR SHALL PROTECT ADJOINING PROPERTY INCLUDING PUBLIC UTILITIES, SANITARY AND STORM DRAINAGE SYSTEMS AND STREETS FROM ANY DAMAGE RESULTING FROM MOVEMENT OF EARTH OR OTHER DEBRIS FROM PROJECT SITE. REPAIR ANY DAMAGE IMMEDIATELY AT NO ADDITIONAL COST.
- E. THE CONTRACTOR SHALL PREVENT ACCUMULATION OF EARTH, SILTATION OR DEBRIS ON ADJOINING PUBLIC OR PRIVATE PROPERTY FROM PROJECT SITE. REMOVE ANY ACCUMULATION OF EARTH OR DEBRIS IMMEDIATELY AND TAKE REMEDIAL ACTIONS FOR PREVENTION.
- F. PRIOR TO SITE CLEARING AND GRADING OPERATIONS, CONTRACTOR SHALL INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROJECT ON THE DOWNSLOPE SIDES OF THE SITE AND EXCAVATE THE TEMPORARY SILTATION BASINS IN THE EXISTING DRAINAGE WAY AS SHOWN ON THE PLANS.
- G. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION.
- H. A COMBINATION OF SILT FENCES, MULTIPLE SEDIMENT TRAPS OR EQUIVALENT SEDIMENT CONTROLS ARE REQUIRED FOR ALL SIDE SLOPES AND DOWNSLOPE BOUNDARIES OF THE DISTURBED AREA.
- I. AS AREAS REACH THEIR FINAL GRADE AND UPON THE COMPLETION OF THE STORM SEWERS, PROVIDE ADDITIONAL SILTATION FENCE, TEMPORARY SILT BASINS, DIVERSION DIKES AND EARTH DIKES, SILT FENCE AND STRAW BALES WRAPPED WITH FILTER FABRIC, DITCH CHECKS AND SILT FENCE ENCLOSURES AROUND ALL STORM SEWER OUTFALLS. THE CONTRACTOR SHALL PROVIDE ADDITIONAL SILTATION FENCE AND EARTH DIKES AS MAY BE REQUIRED ON ALL EMBANKMENTS, EARTH STOCKPILES AND OTHER AREAS TO PROVIDE CONTROL.
- J. THE CONTRACTOR SHALL PROVIDE TEMPORARY AND/OR PERMANENT SEEDING OF AREAS UPON COMPLETION OF GRADING AS SOON AS PRACTICAL. "FINAL STABILIZATION" MEANS ALL SOIL DISTURBING ACTIVITIES ARE COMPLETE AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A MINIMUM DENSITY OF 70% FOR THE AREA HAS BEEN ESTABLISHED OR AN EQUIVALENT STABILIZATION MEASURE.
- K. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA FOR AT LEAST 21 DAYS, THE AREA SHALL BE STABILIZED BY TEMPORARY EROSION CONTROLS WITHIN 14 DAYS OF CEASING CONSTRUCTION ACTIVITIES.
- L. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IN WORKING ORDER, INCLUDING CLEANING, REPAIRING, REPLACEMENT AND SEDIMENT REMOVAL THROUGHOUT THE PERMIT PERIOD. CLEANING OF SILT CONTROL DEVICES SHALL BEGIN WHEN THE FEATURES HAVE LOST A MAXIMUM OF 50% OF THEIR CAPACITY.
- M. THE PROJECT AREA AND CONTROL DEVICES WILL BE INSPECTED BY PERSONNEL ASSIGNED BY THE CONTRACTOR EVERY SEVEN CALENDAR DAYS AND WITHIN 48 HOURS AFTER EACH RAIN EVENT OF 1/2" OR GREATER OR HEAVY SNOW MELT. THE FINDINGS AND ACTIONS TAKEN OF THIS INSPECTION SHALL BE RECORDED IN THE PROJECT DIARY WITH A COPY SUBMITTED WEEKLY TO THE OWNER DURING THE PROJECT. THIS PLAN MAY BE REVISED BASED UPON FINDINGS OF THE INSPECTION. THE CONTRACTOR SHALL IMPLEMENT ALL REVISIONS.
- H. TEMPORARY CONSTRUCTION FENCING TO BE REMOVED AS SECTIONS OF SITE ARE COMPLETED. CONTRACTOR TO PROVIDE PHASED WORK PLAN TO RE-OPEN AREAS.

KEYNOTES

- A. INSTALL SILT FENCE; RE: 07-08/SP400
- B. INSTALL CONSTRUCTION FENCE AROUND TREES TO BE PRESERVED; RE: 10-11/SP400
- C. INSTALL CONSTRUCTION WADDLE; RE: 04/SP400
- D. INSTALL CHAIN LINK CONSTRUCTION FENCE



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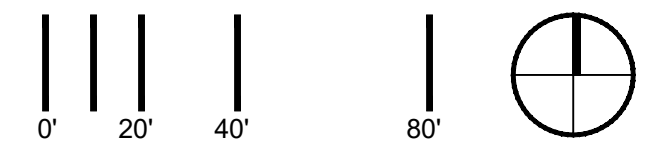
MOHAWK PARK PHASE 2

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EROSION CONTROL PLAN

SP102



SECTION 7

BMP Specification & Detail Sheets

SECTION 02 2700 - PROTECTION AND EROSION CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Silt fences
- B. Inlet Filters

1.02 RELATED SECTIONS:

- A. Section 329119- Landscape Grading.

1.03 QUALITY ASSURANCE

- A. Perform work in accordance with Kansas Department of Transportation standards.

1.04 SUBMITTALS FOR REVIEW

- A. Submittals: Procedures for submittals and SWPPP Plan
- B. Product Data: Provide data for silt fence fabric and posts.
- C. Manufacturer's Installation Instructions: Indicate special procedures, positioning of posts, attachment, and perimeter conditions requiring special attention.

PART 2 - PRODUCTS

2.01 SILT FENCE MATERIALS

- A. Manufacturers:
 - 1. Reference Manufacturer: Mercantile Development, Inc. - Product: Geofab Silt Fence.
 - 2. Other acceptable Manufacturers:
 - a. Amoco Construction Fabrics.
 - 3. Section 01600 - Materials and Equipment: Product options and substitutions. Substitutions: Permitted.
- B. Silt Fence Fabric: 100 percent spunbound nylon reinforced with polyester netting, 4.2 ounces per square yard minimum, 36 inches minimum width; equip with enclosed attachment and support cord.
- C. Posts: Steel, 'T' section, 1.3 pounds per foot; equip with anchor plate.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of existing conditions before starting work.
- B. Verify that subgrade is ready to receive the work of this section.

3.02 PREPARATION

- A. Trench along silt fence line to required elevations.

- B. Remove large stones or other hard matter which could damage silt fence or impede consistent backfilling or compaction.

3.03 INSTALLATION - SILT FENCES

- A. Install silt fence and posts in accordance with fence manufacturer's instructions.
- B. Space posts 8 feet apart to height of 24 inches above subgrade.
- C. Secure fabric to posts, drape bottom of fabric into trench, backfill trench.

3.04 CLEANING

- A. Remove accumulated sediment and repair silt fence periodically.
- B. Remove silt fence, posts, and accumulated sediment prior to landscape grading.

END OF SECTION

THE LINE SHOWN ABOVE IS
EITHER A CENTERLINE OR
SHEET'S ORIGINAL LARGE SIZE

D

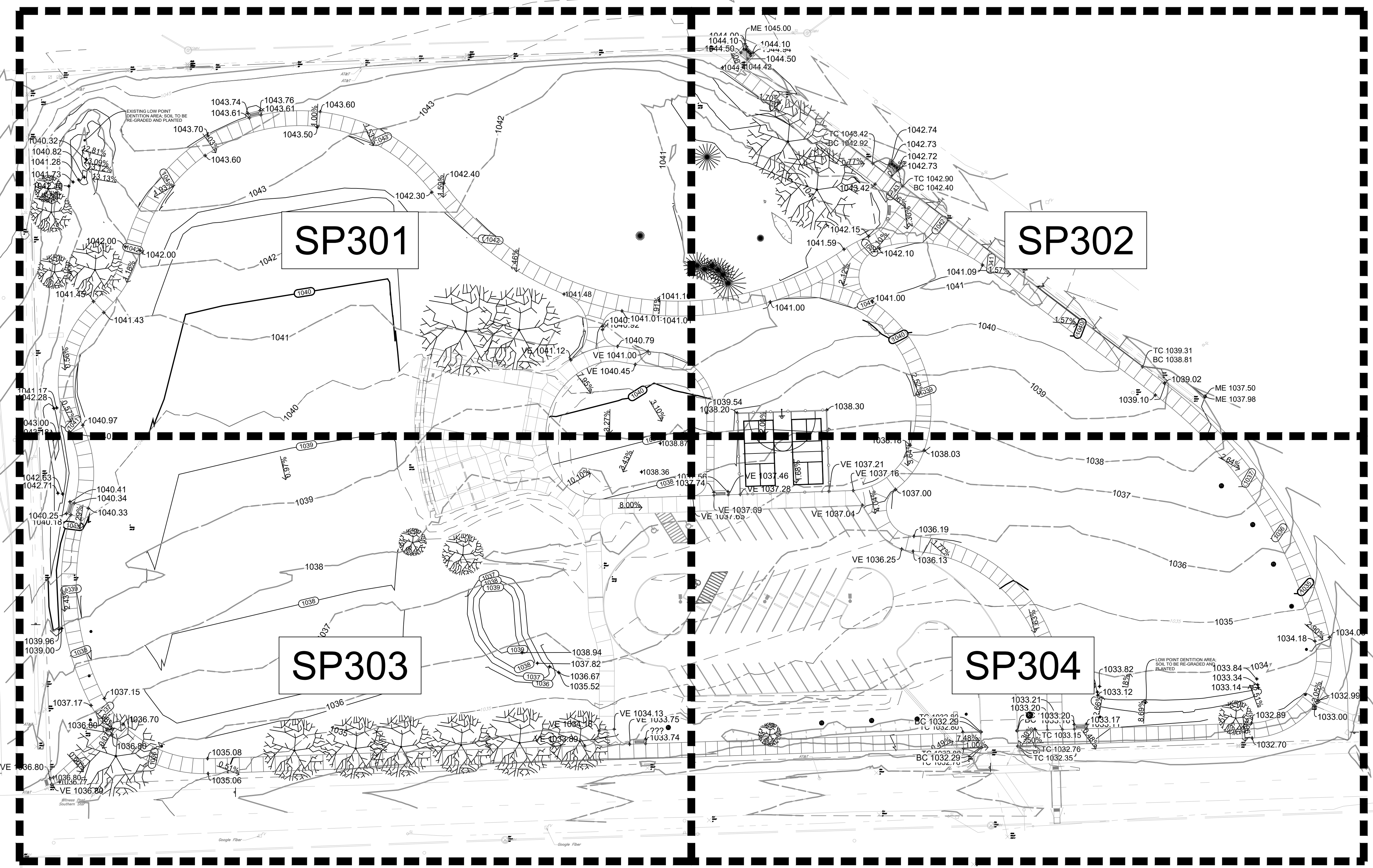
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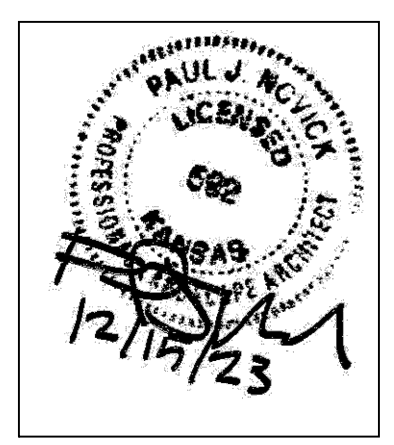


GRADING NOTES

- A. ALL SPOT ELEVATIONS ARE AT THE TOP OF FINISHED SURFACES UNLESS NOTED OTHERWISE. SPOT ELEVATIONS SHOWN IN PARKING ARE AT THE BOTTOM OF CURB. ADD 6" TO COMPUTE TOP OF CURB ELEVATION.
- B. CONTRACTOR TO VERIFY ALL SPOT ELEVATIONS FOR POSITIVE DRAINAGE BEFORE INSTALLATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR POSITIVE SURFACE DRAINAGE IN ALL AREAS, UNLESS OTHERWISE NOTED. ALL NEWLY GRADED GROUND SURFACES SHALL BE FINISHED TO UNIFORM GRADES AND SLOPED IN SUCH A MANNER TO BE FREE OF DEPRESSIONS THAT CAUSE AREAS OF STANDING WATER. THE CONTRACTOR SHALL REPORT ANY CONFLICTS WITH THIS REQUIREMENT TO THE LANDSCAPE ARCHITECT FOR RESOLUTION PRIOR TO FINAL GRADING OPERATIONS.
- C. WALK CROSS SLOPE MAY NOT EXCEED 2.0%. RUNNING SLOPE MAY NOT EXCEED 5.0%. RUNNING SLOPE FOR RAMPS MAY NOT EXCEED 1:12 WITH LANDINGS THAT DO NOT EXCEED 2.0% IN ANY DIRECTION.
- D. WHERE PROPOSED GRADES MEET EXISTING, BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN THE NEW WORK AND EXISTING WORK. PONDING AT JOINTS WILL NOT BE ACCEPTED.
- E. CONTACT LANDSCAPE ARCHITECT PRIOR TO BACKFILLING AGAINST EXISTING BUILDINGS. PROVIDE WATERPROOFING WHEN BACKFILLING AGAINST EXISTING BUILDINGS.
- F. FINAL BERM SHAPE TO BE APPROVED BY LANDSCAPE ARCHITECT.
- G. SEE SPECIFICATIONS FOR MINIMUM DEPTH OF TOPSOIL FOR ALL LAWN AREAS AND PLANTING BEDS.
- H. DEBRIS SHALL BE REMOVED AND PAVEMENT WITHIN THE RIGHT-OF-WAY SWEEPED AT THE END OF EACH WORKING DAY.
- I. CONTRACTOR TO FIELD ADJUST ALL EXISTING SITE UTILITIES TO NEW FINISHED GRADES. EXISTING UTILITIES INCLUDE, BUT ARE NOT LIMITED TO, FIRE HYDRANTS, MANHOLE RIMS, INLETS, WATER VALVES, AND LIGHT BASES.
- J. SILT FENCE AND INLET PROTECTION SHALL BE MAINTAINED UNTIL ESTABLISHMENT OF PERMANENT GROUND COVER.



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GRADING PLAN

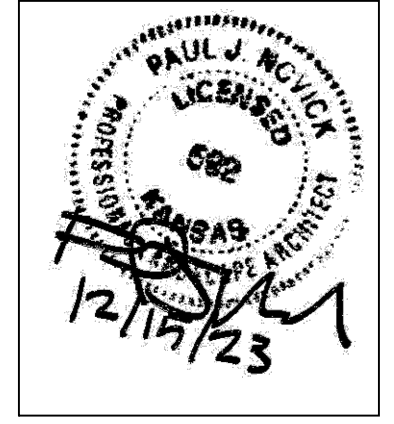
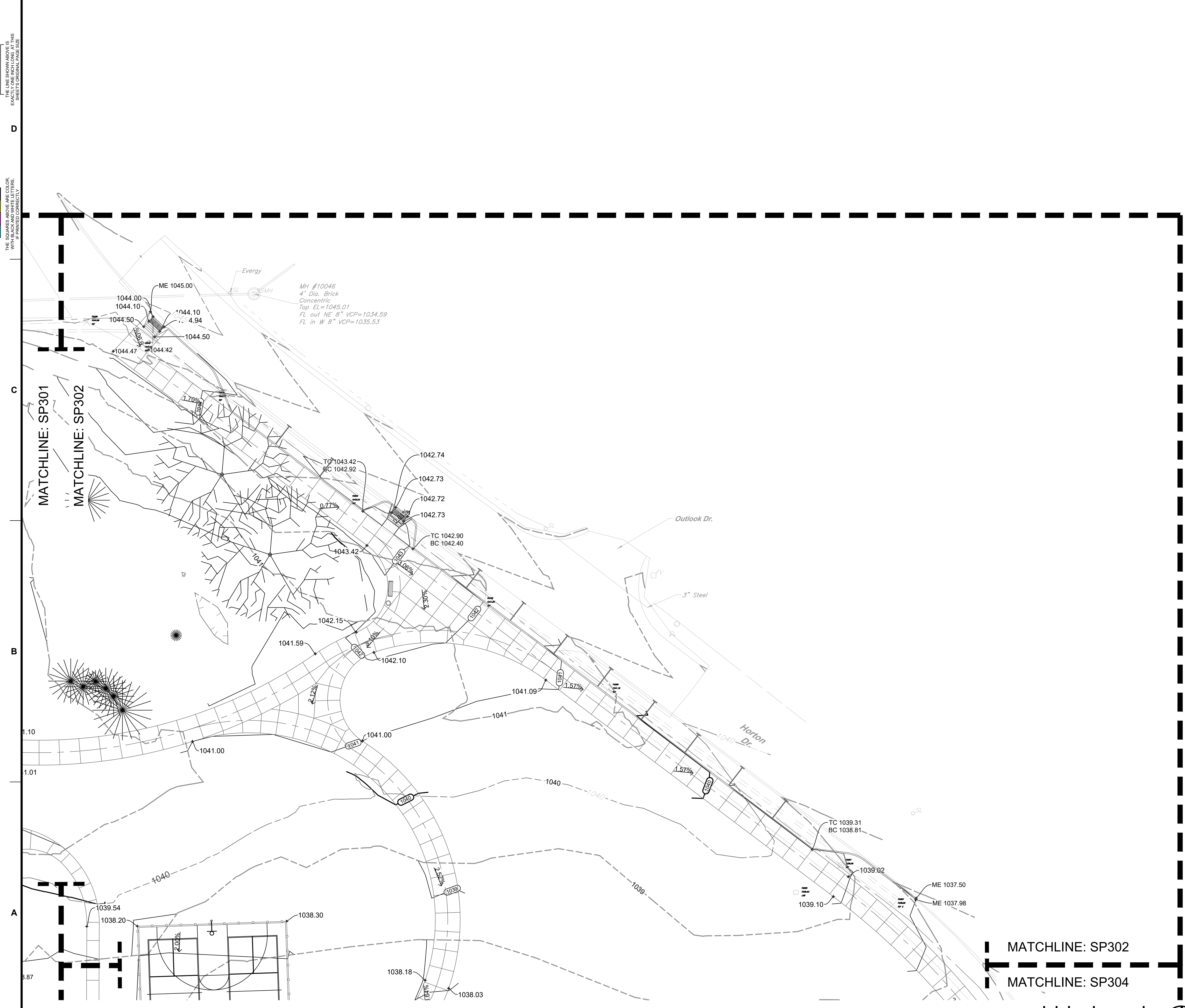
SP300

01 SP300 GRADING PLAN



THE LINE SHOWN ABOVE IS
 EITHER A CENTERLINE OR
 SHEET'S ORIGINAL LARGE SIZE

THE SQUARES ABOVE ARE COLOR
 WITH AN AREA OF 100 SQUARE FEET.
 IF PROVIDED CORRECTLY.



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GRADING PLAN
 ENLARGEMENT

SP302

03 SP302 GRADING PLAN ENLARGEMENT

MATCHLINE: SP302
 MATCHLINE: SP304

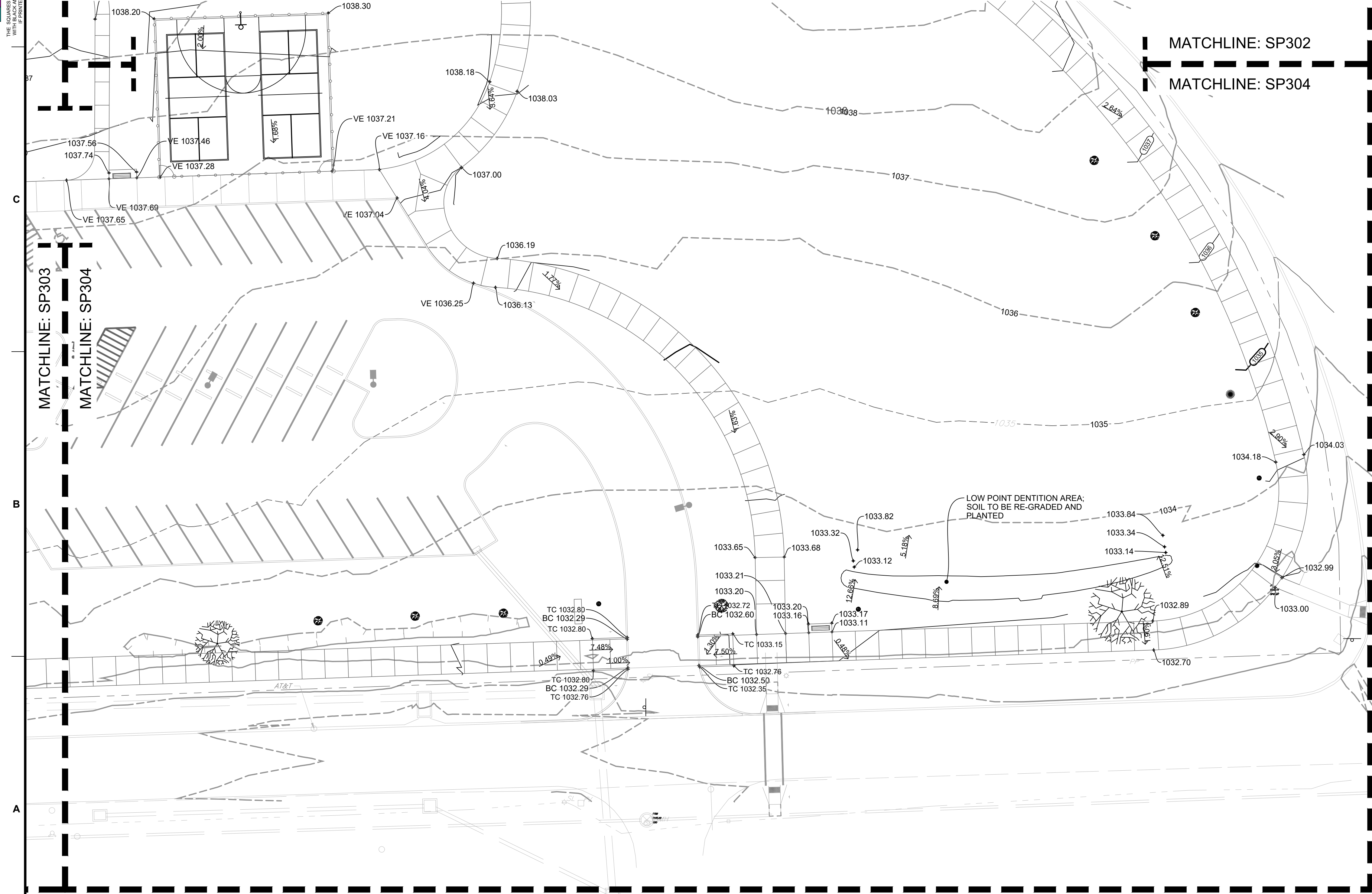


BMP GRADING NOTES

- A. WHERE PROPOSED GRADES MEET EXISTING, BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN THE NEW WORK AND EXISTING WORK.
- B. SILT FENCE AND INLET PROTECTION SHALL BE MAINTAINED UNTIL ESTABLISHMENT OF PERMANENT GROUND COVER.
- C. SOIL TO BE 12"-18" SAND / LOAM MIX
- D. BMP TO MEET APWA SECTION 5600 AND MARC BMP MANUAL REQUIREMENTS.

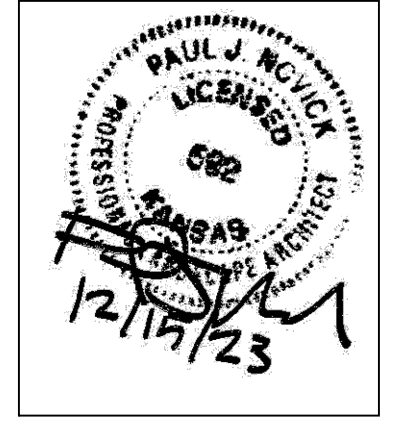
THE LINE SHOWN ABOVE IS ENLARGED FROM THE ORIGINAL SIZE SHEET'S ORIGINAL SCALE SIZE

THE SQUARES ABOVE ARE COLOR WITH AN AREA OF 10 SQUARE FEET. IF PRINTED CORRECTLY, THE SQUARES SHOULD BE THE SAME COLOR.



MATCHLINE: SP302
 MATCHLINE: SP304

MATCHLINE: SP303
 MATCHLINE: SP304



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MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

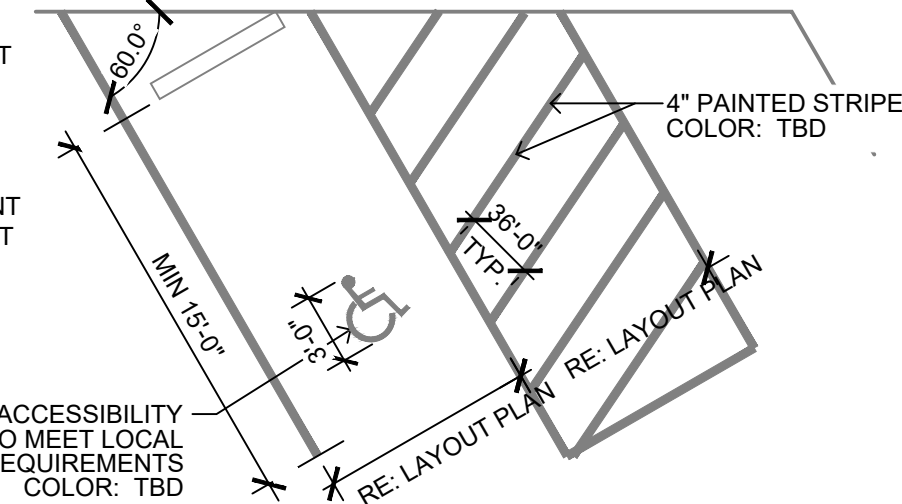
GRADING PLAN
 ENLARGEMENT

SP304

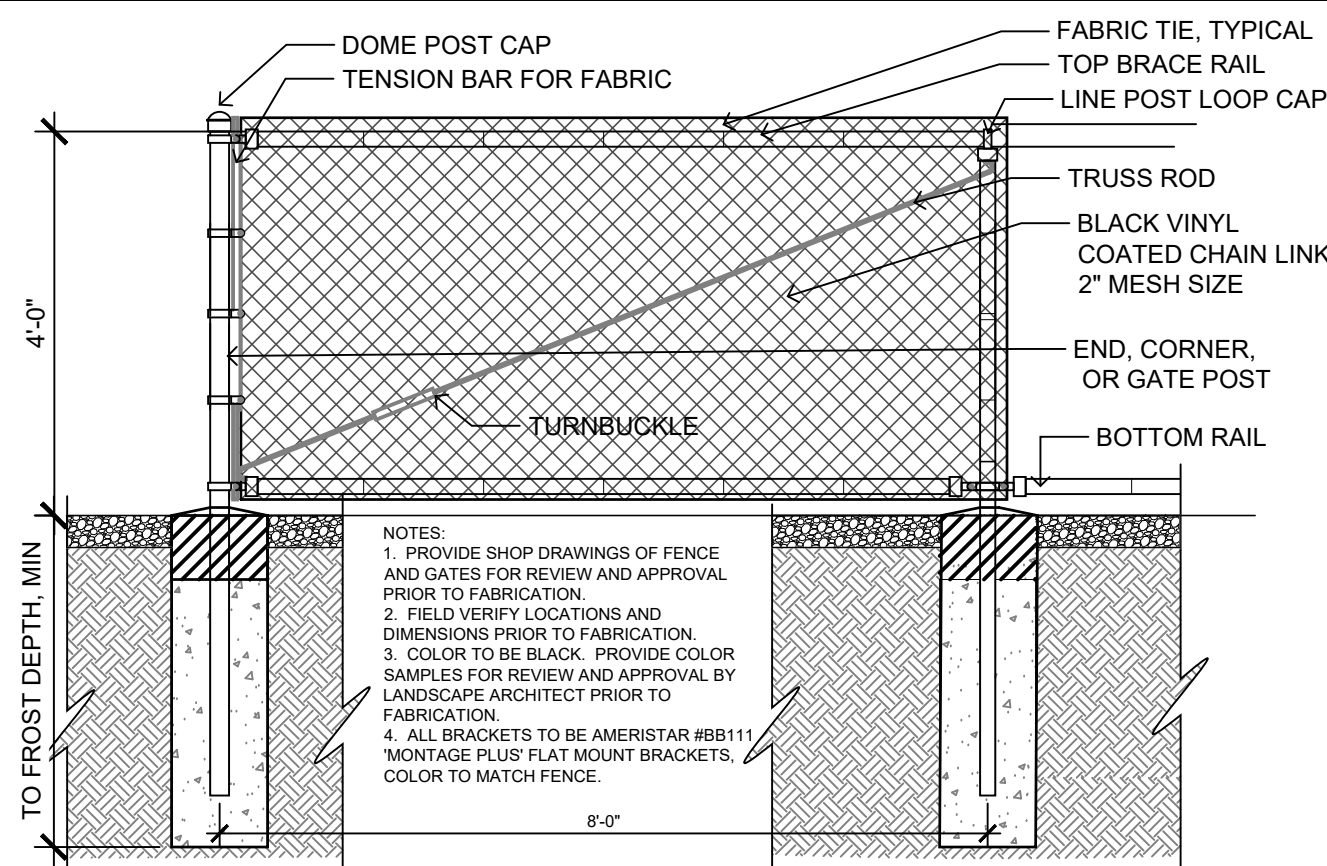
05 SP304 GRADING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS WITH ORIGINAL SCALE SIZE. SHEETS ORIGINAL SCALE SIZE.
 THE SQUARES ABOVE ARE COLOR WITH ORIGINAL SCALE SIZE. IF PROVIDED CORRECTLY.

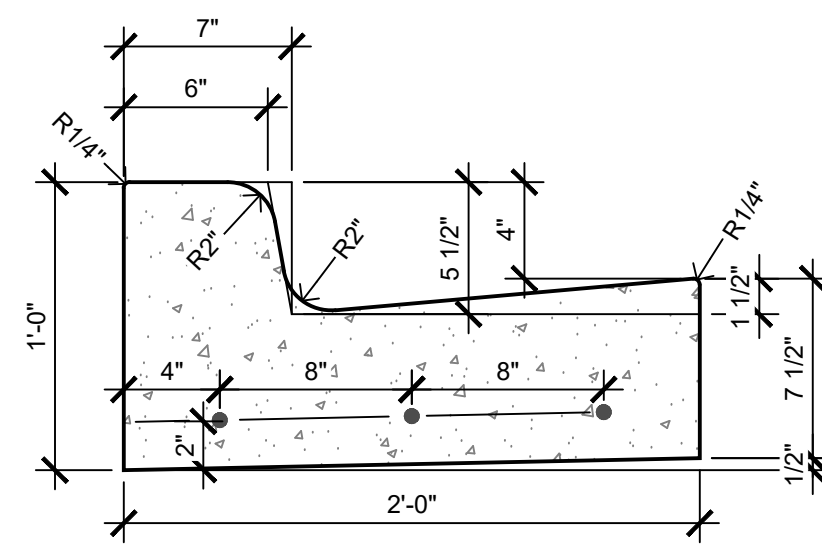
- PAVEMENT PAINT SPECS**
- MPT #32 ALKYD TRAFFIC PAINT
 - VERIFY LAYOUT AND COLOR WITH ARCHITECT
 - SWEEP AND CLEAN PAVEMENT PRIOR TO PAINTING
 - APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE PAVEMENT MARKINGS WITH UNIFORM, STRAIGHT EDGES
 - APPLY 2 COATS



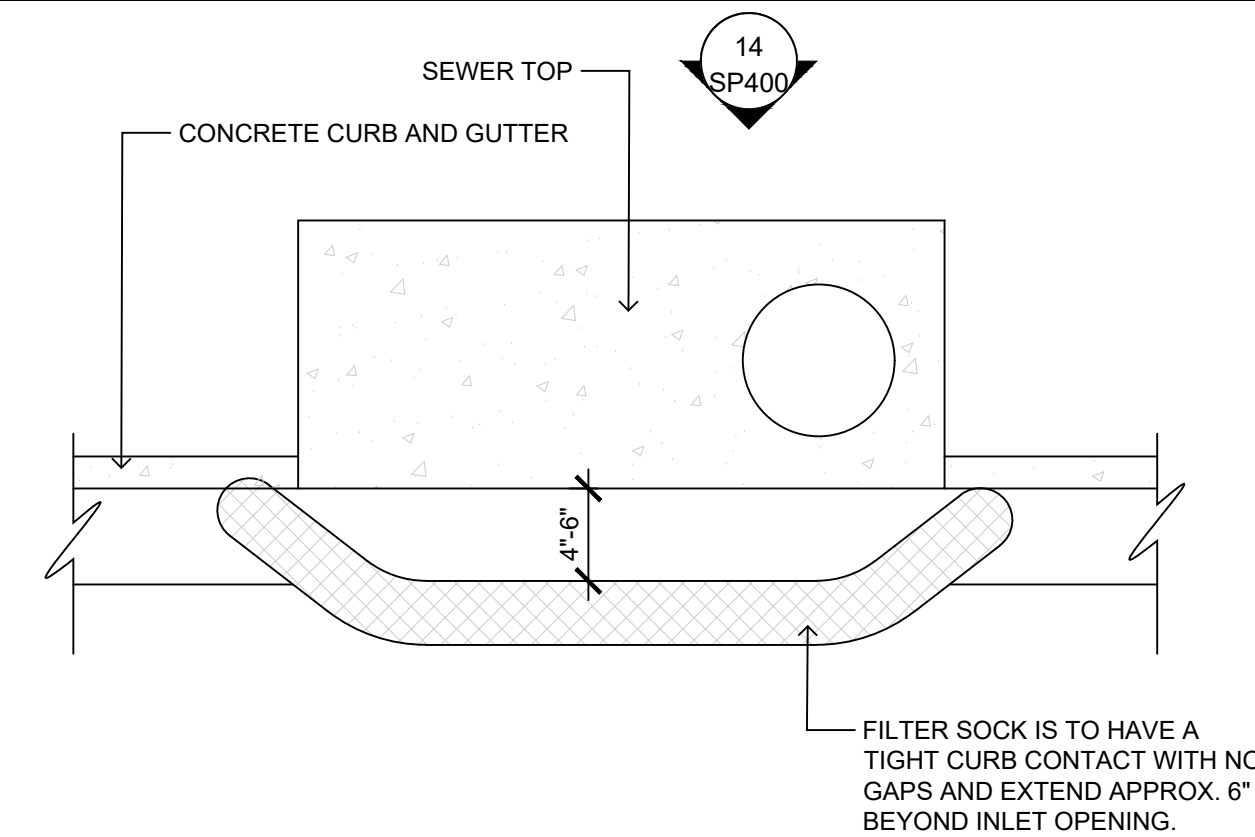
15 SP400 PLAN: ADA PARKING STRIPING SCALE: 1/4" = 1'-0"



12 SP400 SECTION: 4'-0" BLACK VINYL CHAINLINK SCALE: 1/2" = 1'-0"

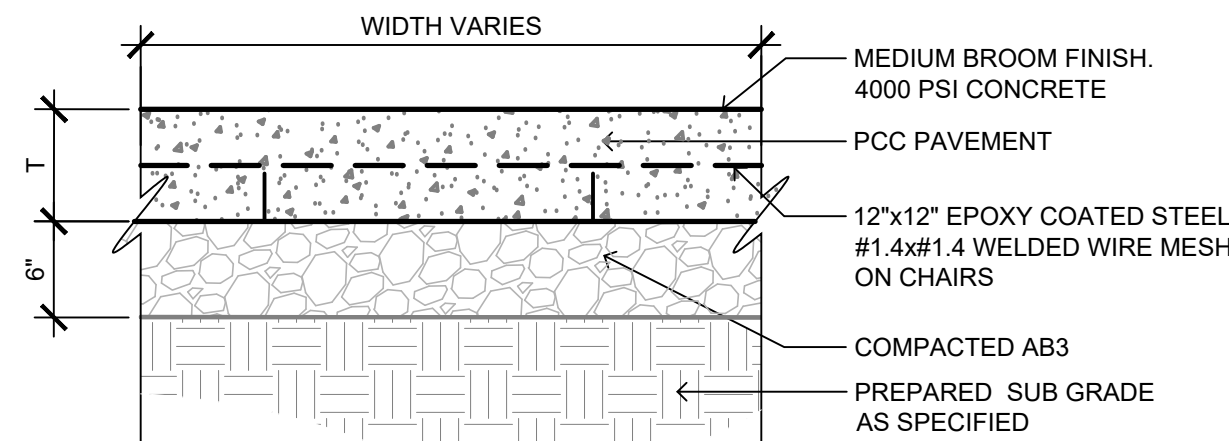


08 SP400 SECTION: CONCRETE CURB SCALE: 1 1/2" = 1'-0"



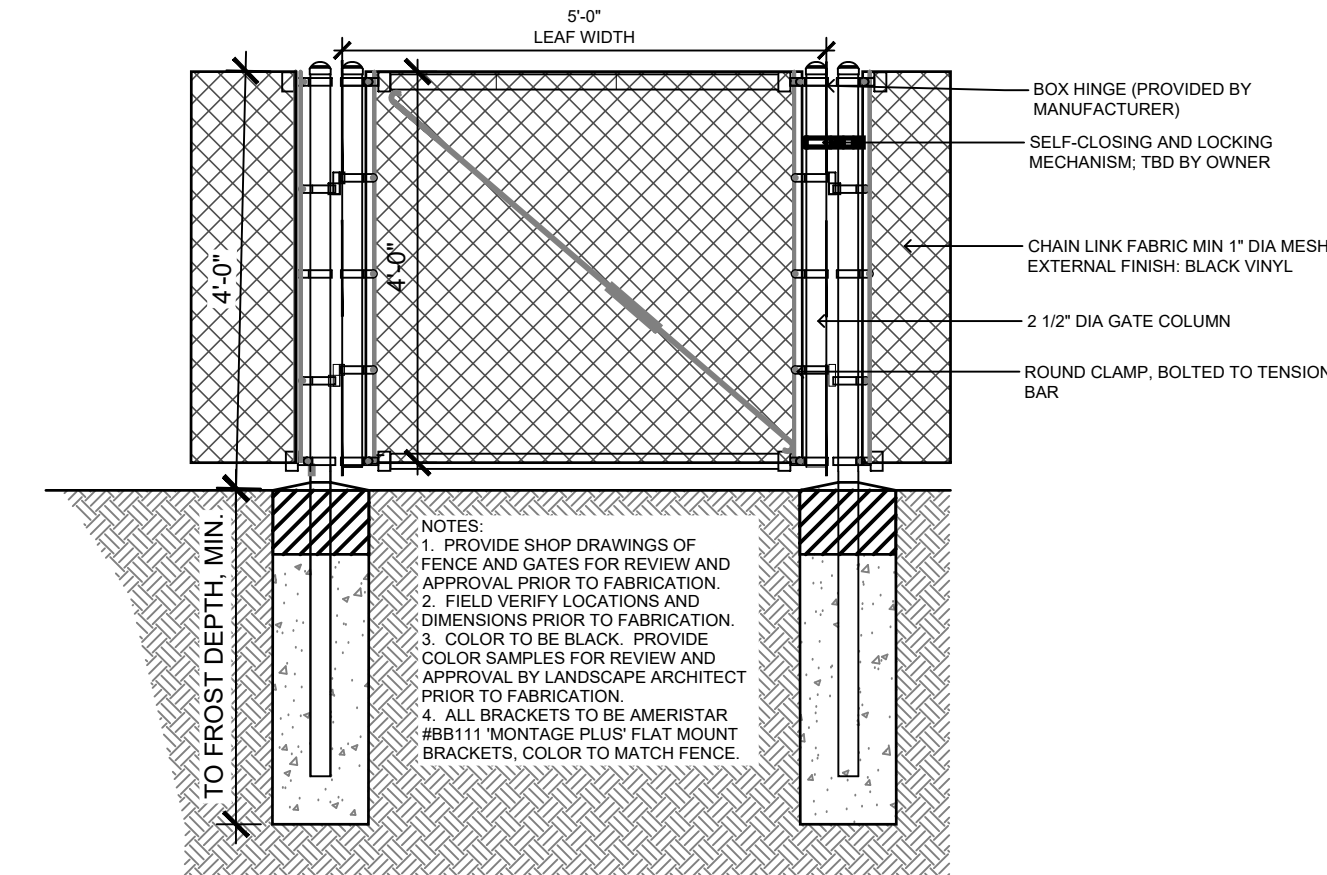
04 SP400 PLAN: SUMP INLET FILTER SCALE: 1" = 1'-0"

T = PAVEMENT THICKNESS (RE: SITE PLANS)

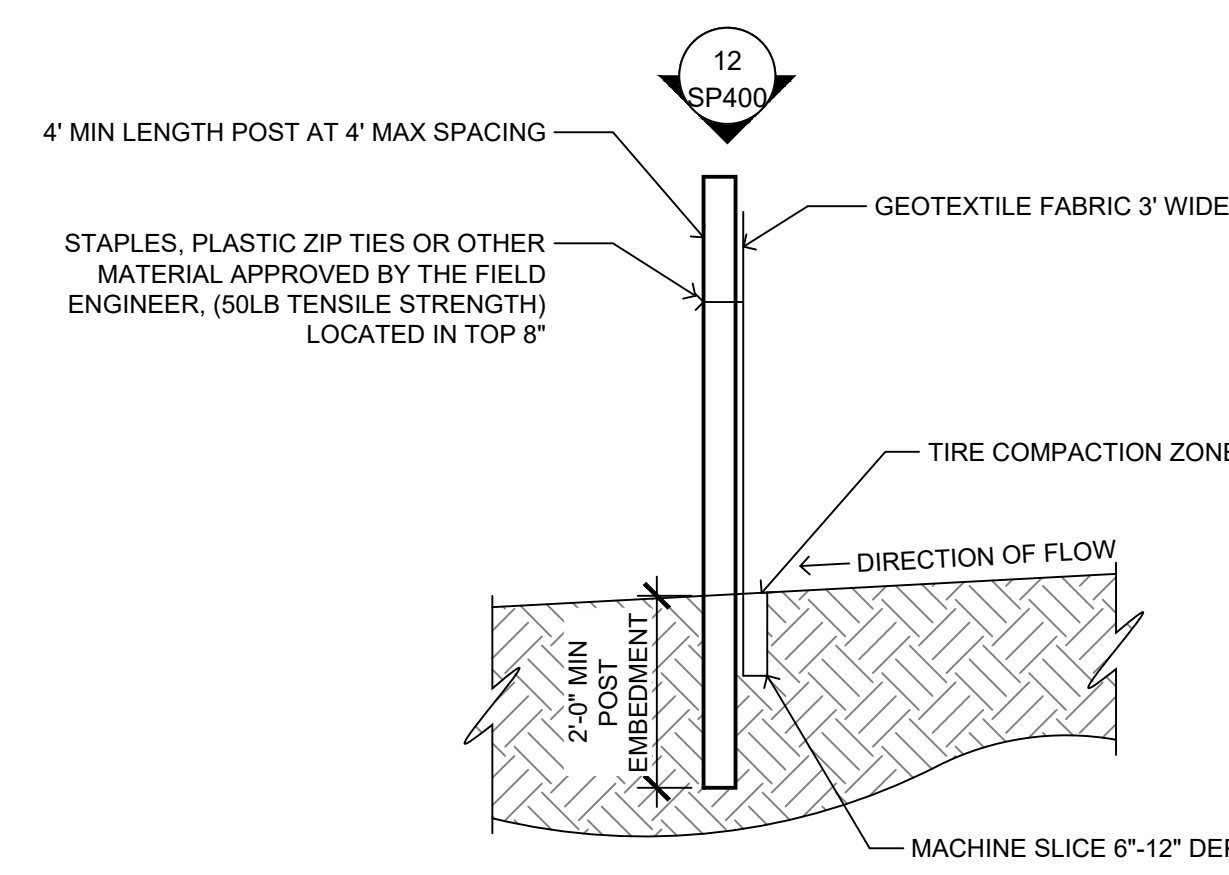


- NOTES:**
1. CROSS SLOPE NOT TO EXCEED 2.0%.
 2. CONTROL JOINTS TO OCCUR AT SPACING EQUAL TO WIDTH OF SLAB UNLESS INDICATED ON PLAN OR BY LANDSCAPE ARCHITECT.

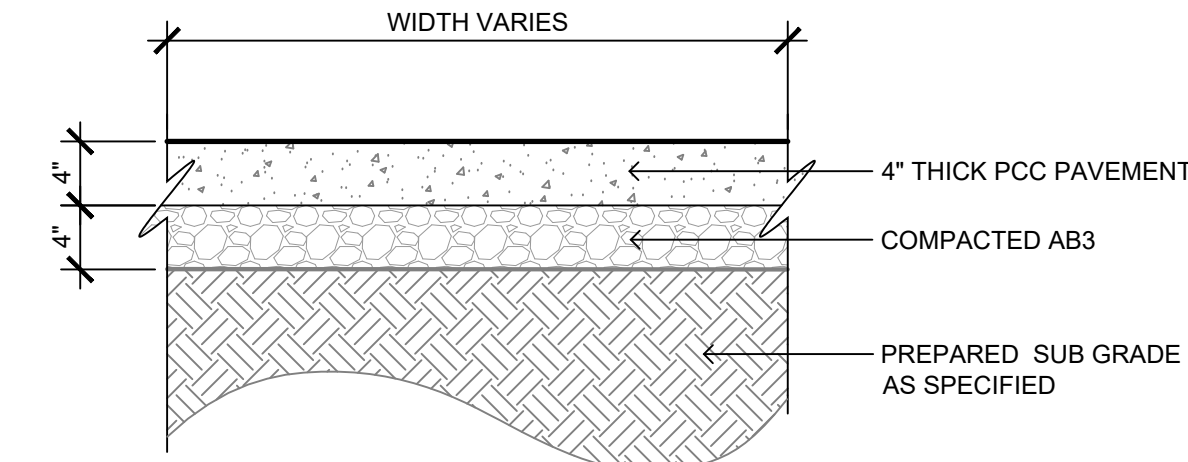
14 SP400 5" PCC CONCRETE COURT SCALE: 1" = 1'-0"



11 SP400 ELEVATION: GATE VINYL CHAINLINK SCALE: 1/2" = 1'-0"



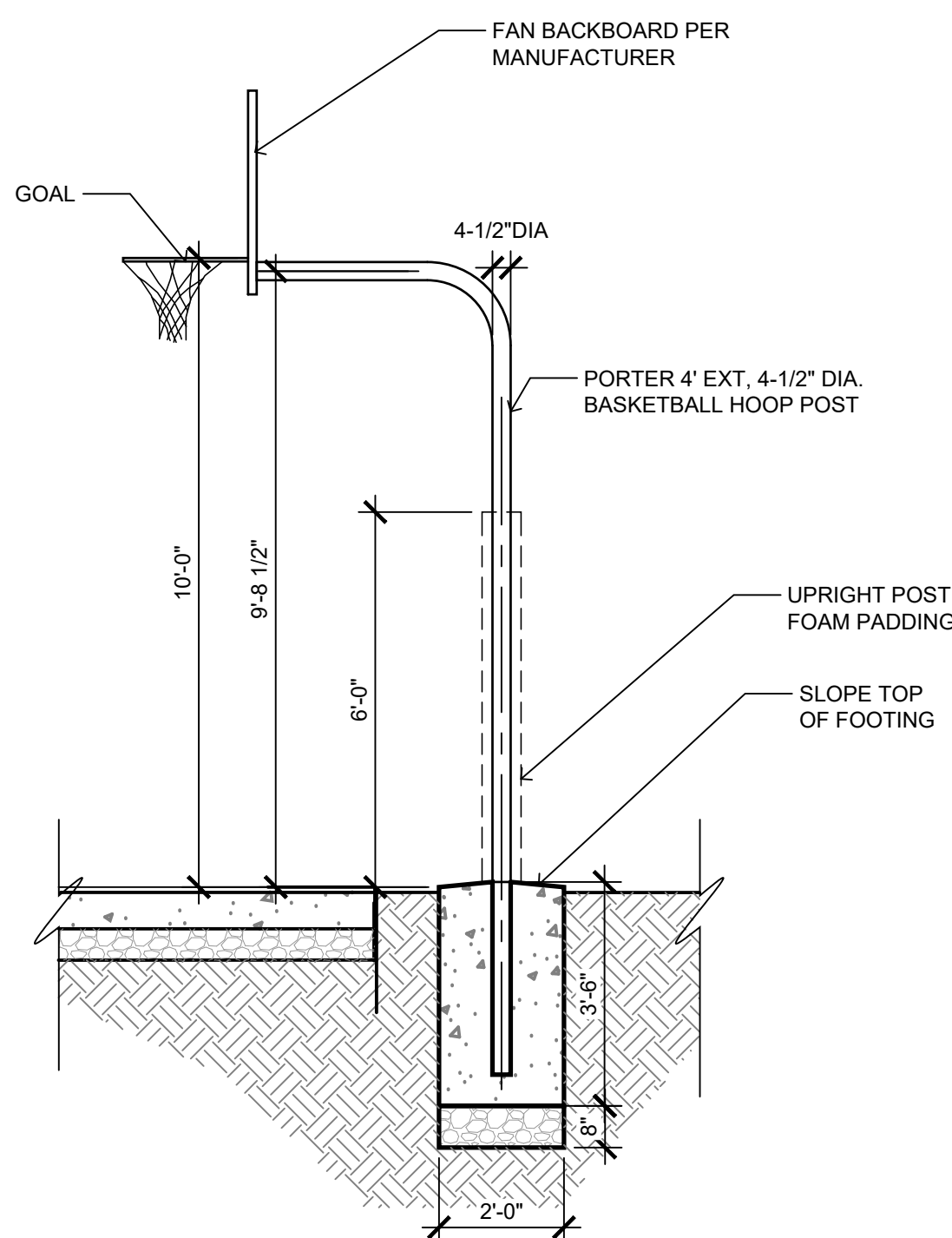
07 SP400 SECTION: SILT FENCE SCALE: 1/2" = 1'-0"



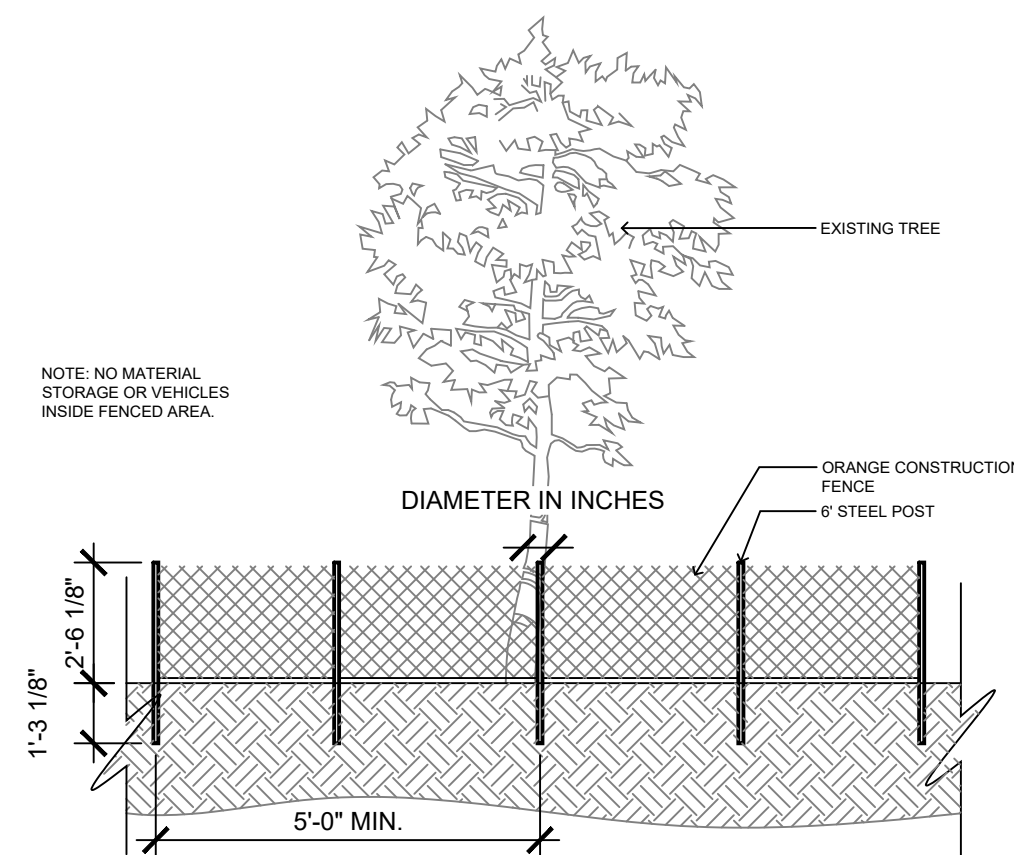
- NOTES:**
1. CROSS SLOPE NOT TO EXCEED 2.0%.
 2. CONTROL JOINTS TO OCCUR AT SPACING EQUAL TO WIDTH OF SLAB UNLESS INDICATED ON PLAN OR BY LANDSCAPE ARCHITECT.

03 SP400 4" PCC CONCRETE SCALE: 1" = 1'-0"

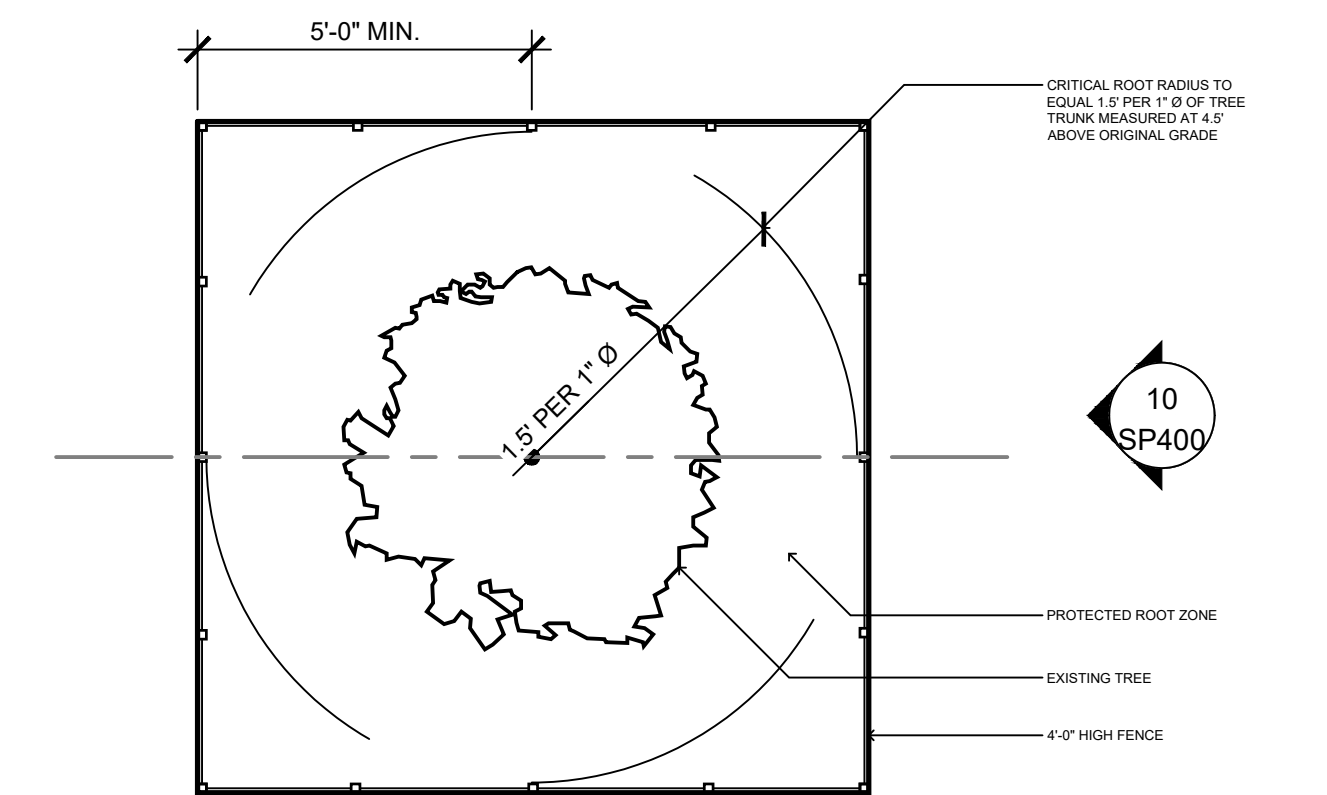
- NOTES:**
1. MODEL: PORTER 4' EXT. 4-1/2" DIA. BASKETBALL HOOP WITH POST MANUFACTURER: ANTHEM SPORTS (WWW.ANHEM-SPORTS.COM)
 2. MINIMUM RECOMMENDED FOOTING SIZE SHOWN PER MANUFACTURER'S INSTRUCTION AND RECOMMENDATION. CONTRACTOR TO VERIFY WITH GEO-TECH REPORT TO ENSURE THE SIZE OF FOOTING MEET THE REQUIREMENTS AND LOCAL BUILDING CODES REGARDING THE MINIMUM WIND SPEEDS.
 3. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR LANDSCAPE ARCHITECT'S REVIEW AND OWNER'S APPROVAL.



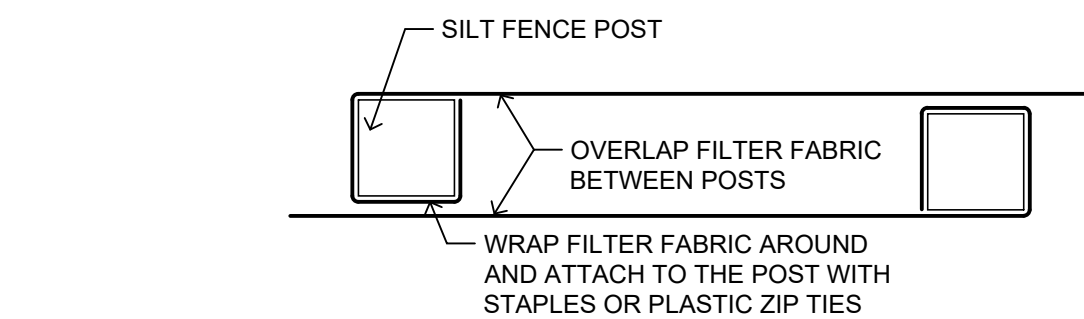
13 SP400 ELEVATION: BASKETBALL GOAL POST SCALE: 3/8" = 1'-0"



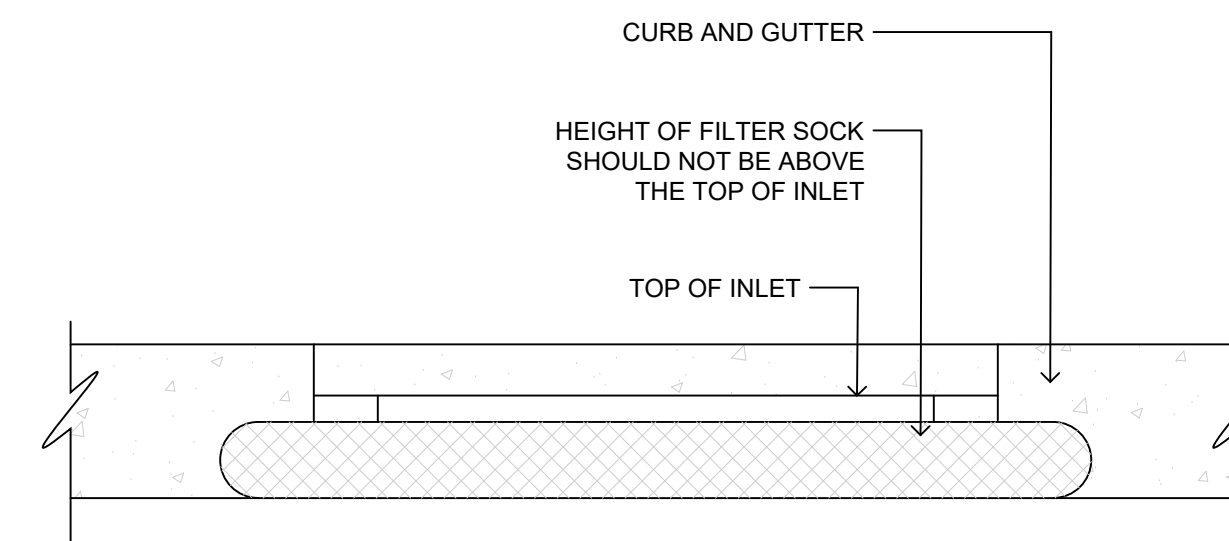
10 SP400 ELEVATION: TREE PROTECTION SCALE: 1/4" = 1'-0"



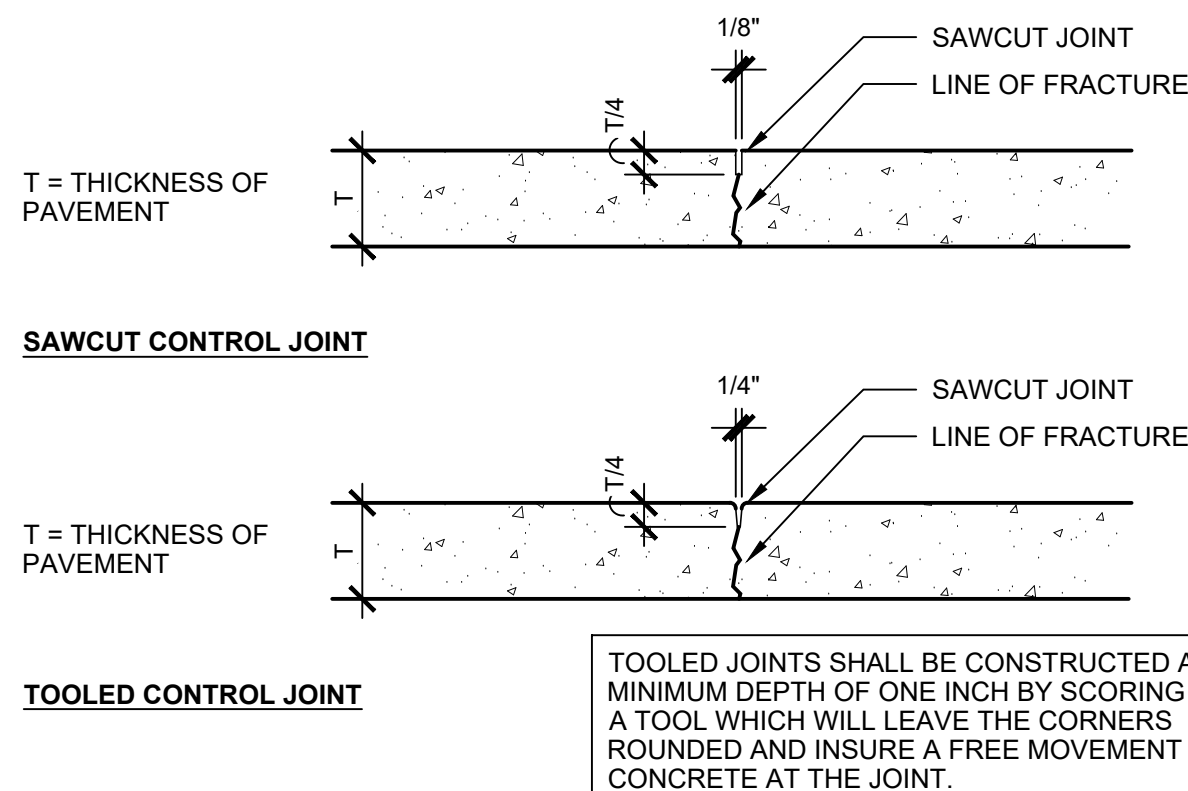
09 SP400 PLAN: TREE PROTECTION SCALE: 1/4" = 1'-0"



06 SP400 PLAN: JOINING SILT FENCE SECTIONS SCALE: 1 1/2" = 1'-0"



05 SP400 ELEVATION: SUMP INLET FILTER SCALE: 1" = 1'-0"

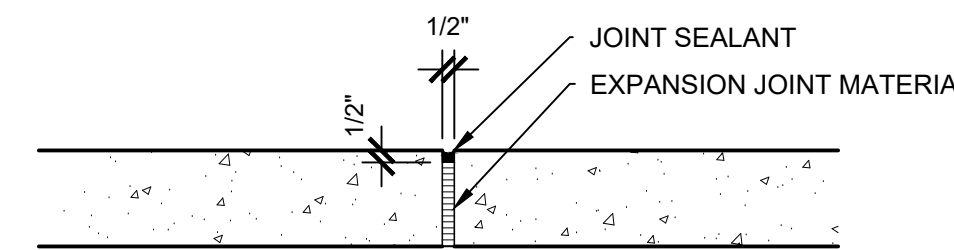


02 SP400 CONTROL JOINT SCALE: 1 1/2" = 1'-0"

ALL EXPANSION JOINTS IN WALKS SHALL BE SEALED WITH A SELF LEVELING URETHANE JOINT SEALANT. ASTM C920, MULTI-COMPONENT (M), GRADE P, CLASS 25, TRAFFIC (T) EXPOSURE. COLOR TO BE MANUFACTURERS STANDARD GRAY OR LIMESTONE.

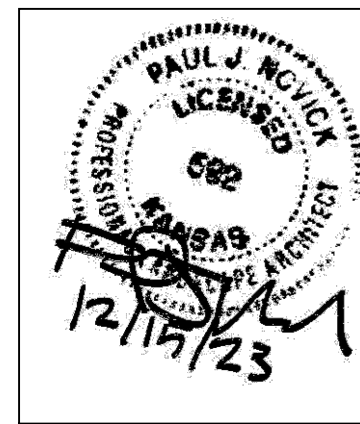
CLEAN, PRIME, AND BACK JOINTS AS RECOMMENDED BY SEALANT MANUFACTURER. INSTALL IN ACCORDANCE WITH ASTM C1193.

CLEAN OFF EXCESS SEALANT AND SMEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND MATERIALS APPROVED IN WRITING BY THE SEALANT MANUFACTURER.



SPACE EXPANSION JOINTS NOT TO EXCEED 35' IN CONCRETE WALKS AND WHERE INDICATED ON PLAN.

01 SP400 EXPANSION JOINT SCALE: 1 1/2" = 1'-0"



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DETAILS

SP400

THE LINE SHOWN ABOVE IS
 EITHER AN ORIGINAL OR
 A COPY OF THE ORIGINAL

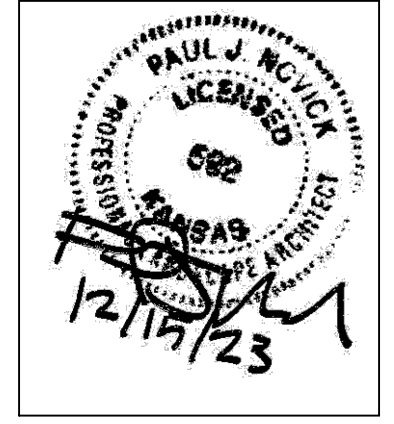
D

THE SQUARES ABOVE ARE COLOR
 WITH THE ORIGINAL DRAWING
 IF PRINTED CORRECTLY

C

B

A



Revision Schedule

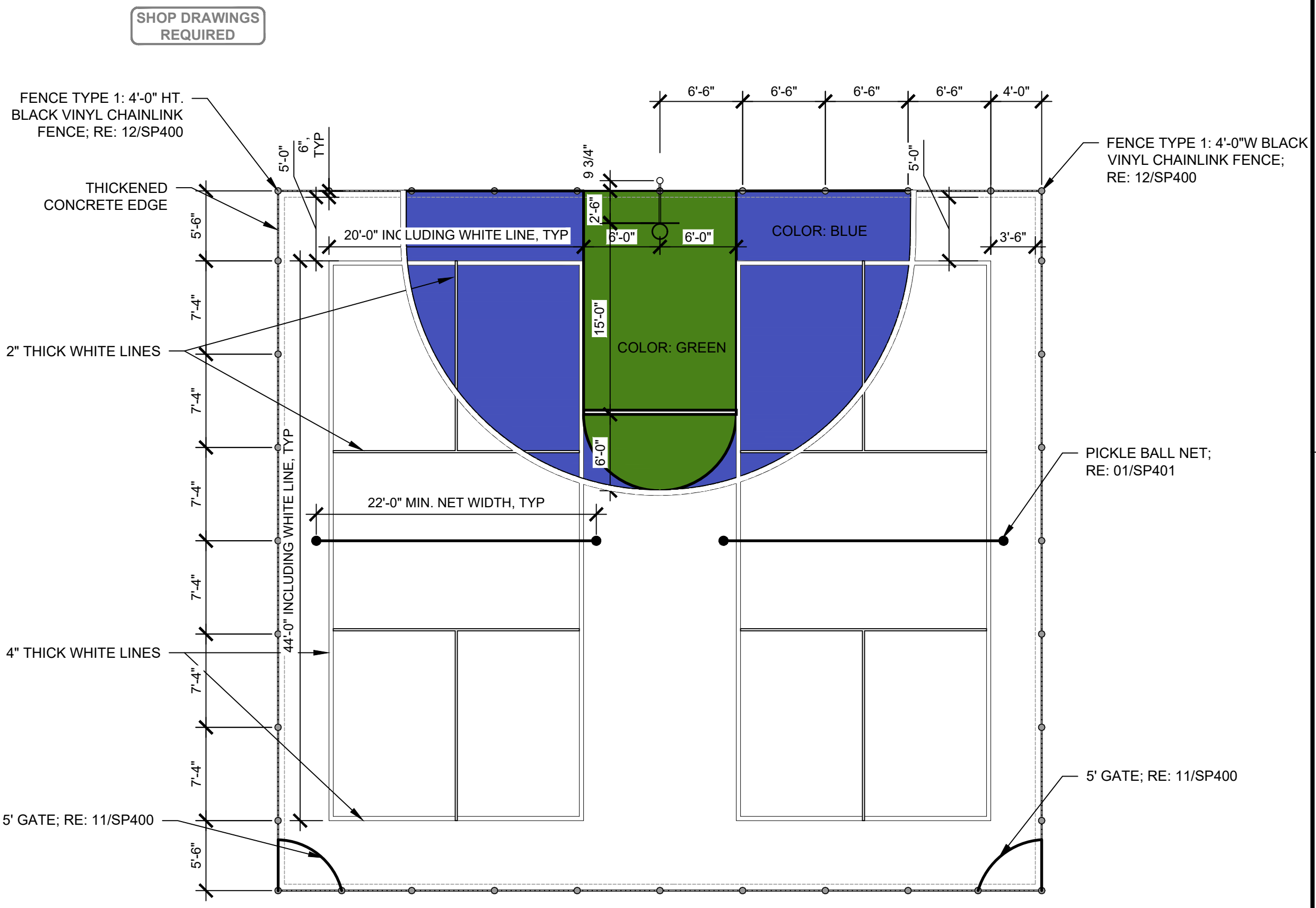
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COURT NOTES:

- A. COATING NOTES:**
- THE CONCRETE SURFACE SHALL BE CLEAN PRIOR TO APPLYING COLOR COAT.
 - IT SHALL BE DRY AND FREE OF DUST, DIRT DURING THE APPLICATION OF THE PAVEMENT SURFACE SYSTEM.
 - TO CORRECT MINOR SURFACE IRREGULARITIES, APPLY A FILLER COAT. CHECK THE FILLER COAT COMPATIBILITY WITH THE COLOR SURFACE SUPPLIER.
 - APPLY AT LEAST ONE COAT OF ACRYLIC RESURFACER AND AT LEAST 2 COATS OF 'LIQUID APPLIED' CUSHIONING SYSTEM TO THE CONCRETE BASE.
 - CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION SPECIFICATIONS
- B. PICKLEBALL COURT MARKING NOTES:**
- ALL WHITE LINE STRIPING SHALL BE 2" WIDE EXCEPT FOR BASE LINES WHICH SHALL BE 4" WIDE WHITE.
 - DIMENSIONS GIVEN ARE MEASURED TO THE OUTSIDE OF THE LINE EXCEPT FOR THE CENTER SERVICE LINE AND THE CENTER MARK, BOTH OF WHICH SHALL BE ON THE CENTERLINE OF THE COURT.
 - PLAYING LINES SHALL NOT VARY MORE THAN 1/4" FROM THE EXACT MEASUREMENTS.
- C. PROJECT COMPLETION:**
- UPON COMPLETION OF WORK THE CONTRACTOR SHALL CAREFULLY CLEAN-UP AND REMOVE ALL LEFT OVER MATERIALS SO AS TO RETURN THE WORK SITE TO THE CONDITION IT WAS PRIOR TO CONSTRUCTION ACTIVITIES.

NOTES - BASKETBALL COURT COLORS

- 3 POINT LINE AREA: BLUE
- INNER AREA: GREEN
- OTHER LINES: WHITE
- CONTRACTOR TO PROVIDE TWO 6"X6" SAMPLES OF THE IN-BOUND COURT COLOR. LANDSCAPE ARCHITECT AND OWNER TO CHOOSE FROM THE BLUE AND THE GREEN COLOR SECTION SAMPLES.

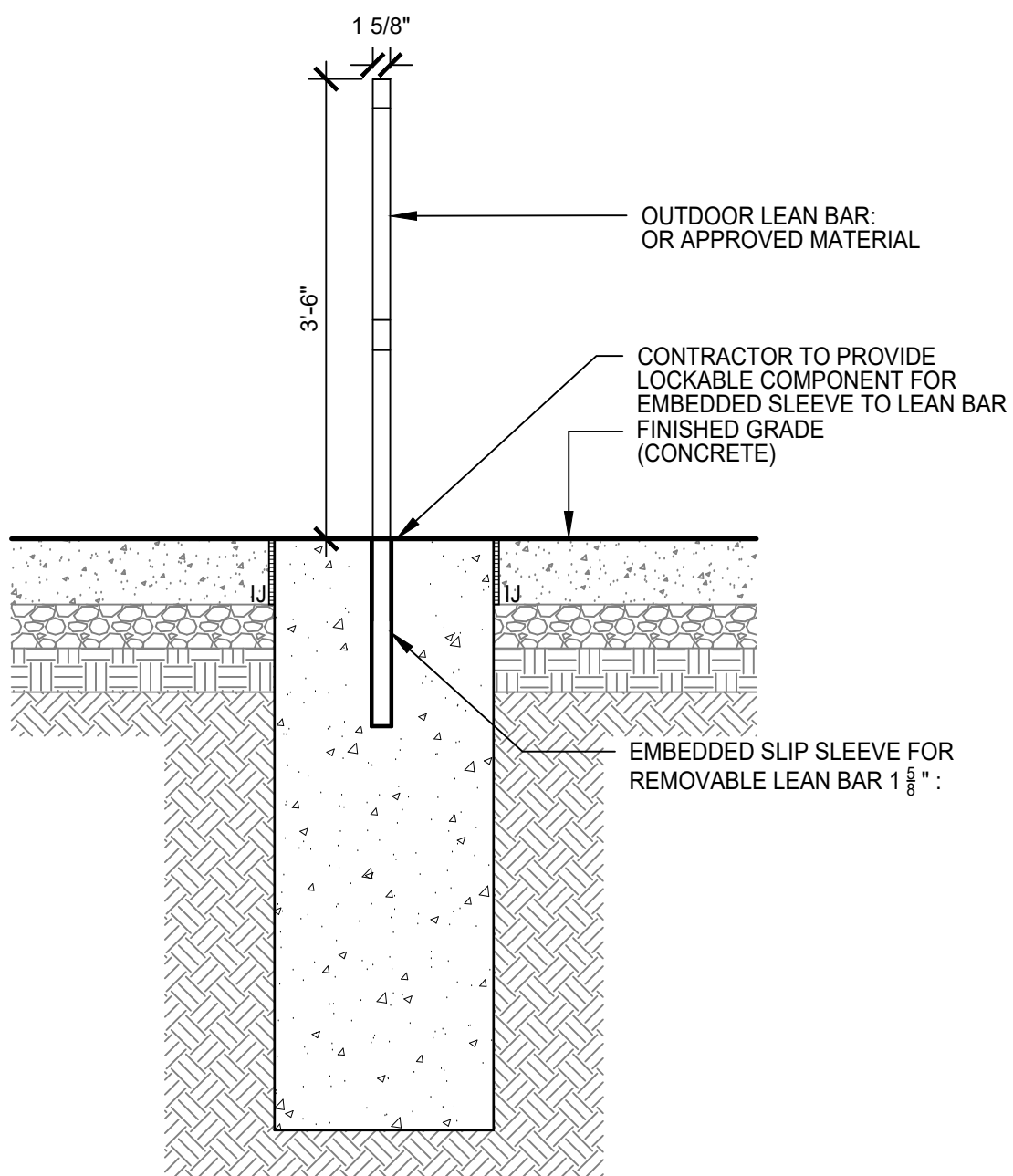


02
 SP401 PLAN: COURT MARKINGS

SCALE 1/8"=1'-0"

UNLINE RAIL
 MFR: UNLINE
 OR APPROVED EQUAL
 MODEL NO: (H-62976L)
 SIZE: 1 5/8" DIAMETER STEEL PIPE WITH 21" HIGH WELDED MIDRAIL.
 COLOR: POWDER COATED - CLASSIC BLACK
 CONTACT: www.UNLINE.COOM

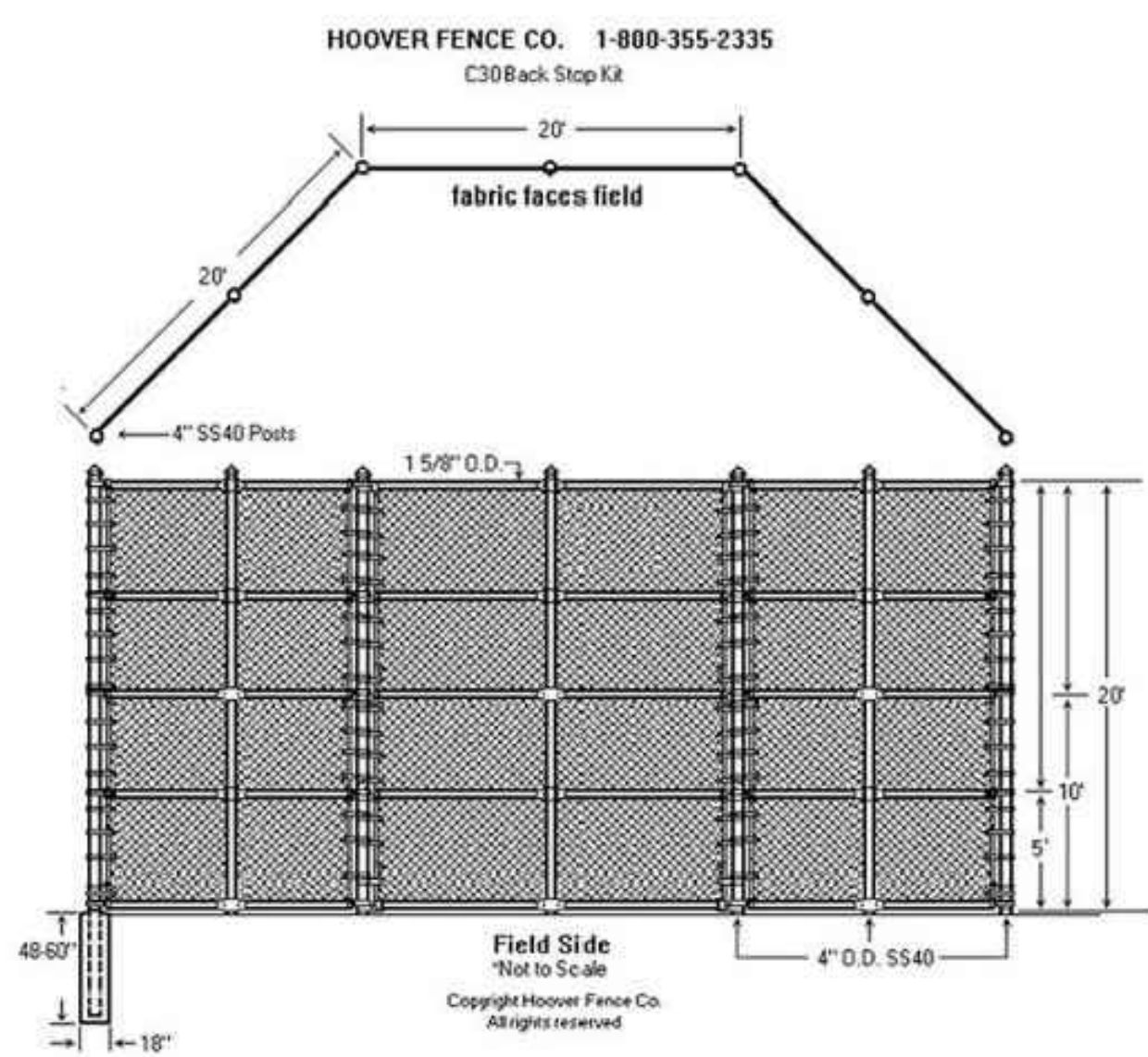
SHOP DRAWINGS
 REQUIRED



04
 SP401 DETAIL: EMBEDDED SLEEVE WITH REMOVABLE LEAN BAR
 SCALE: 3/4" = 1'-0"

BACKSTOP KIT, 20' WIDE, 20' WINGS, 20' HIGH

MFR: HOOVER FENCE CO.
 OR AS APPROVED EQUAL
 MODEL NO: (Model #BS-C30)
 SPEC: 9 GAUGE GALVANIZED CHAIN LINK
 CONTACT: www.hooverfence.com



03
 SP401 DETAIL: BACKSTOP

PICKLE BALL NET

MFR: ONCOURT OFFCOURT PICKLENET DELUXE
 OR AS APPROVED EQUAL
 MODEL NO: (Model #OO250)
 COLOR: WHITE
 CONTACT: www.pickleballcentral.com



01
 SP401 SECTION: MOVEABLE PICKLEBALL NET
 N.T.S.

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SITE DETAIL

SP401

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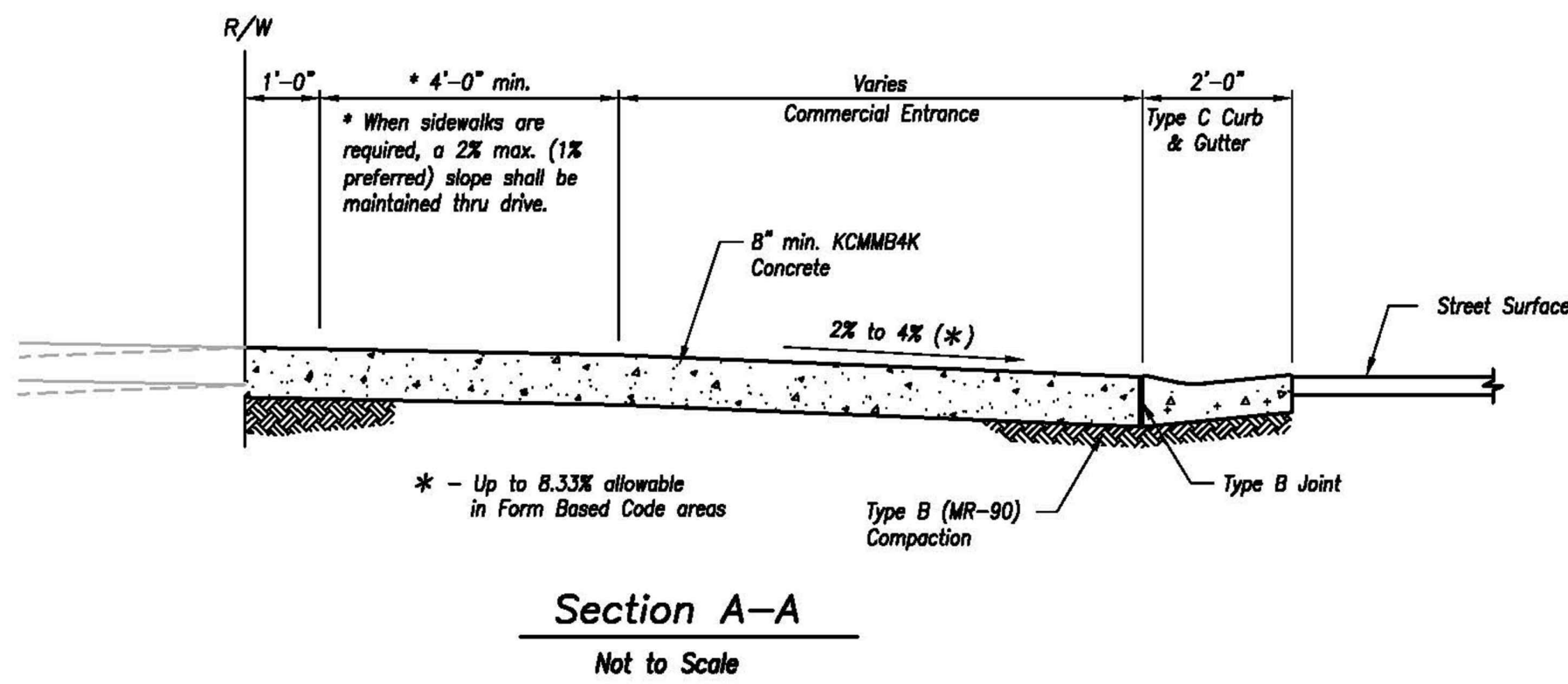
D

THE SQUARES ABOVE ARE COLOR MATCHING SQUARES. IF PRINTED CORRECTLY, THEY SHOULD APPEAR AS SHOWN.

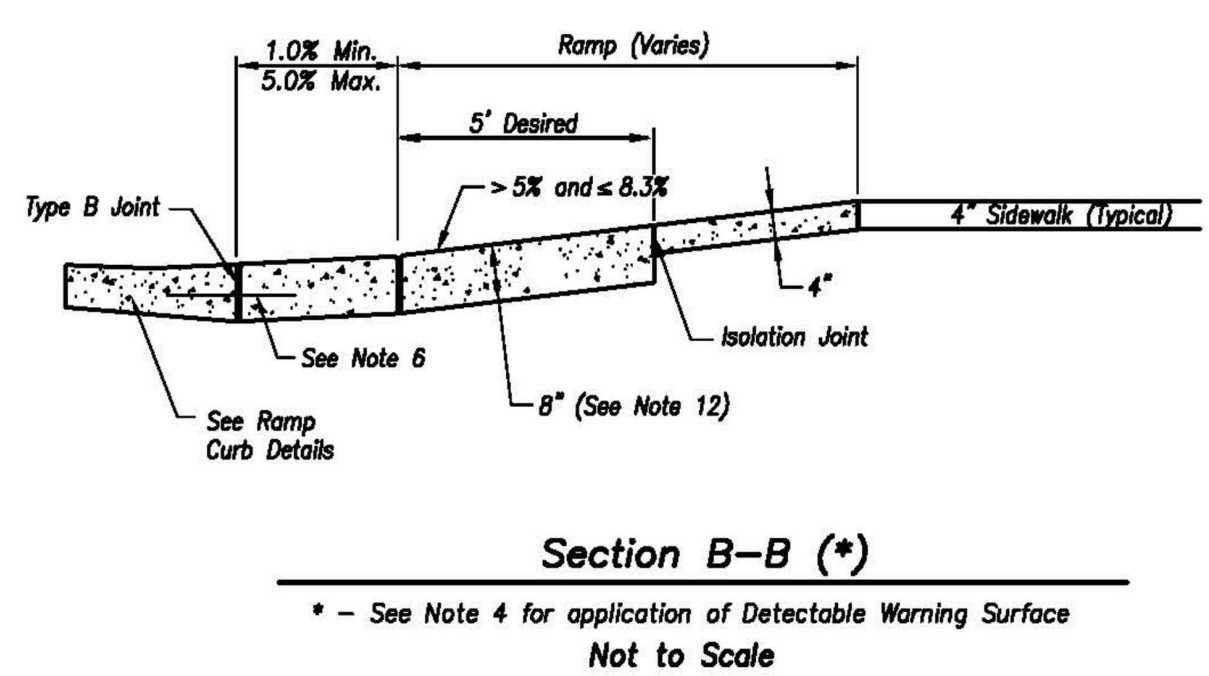
C

B

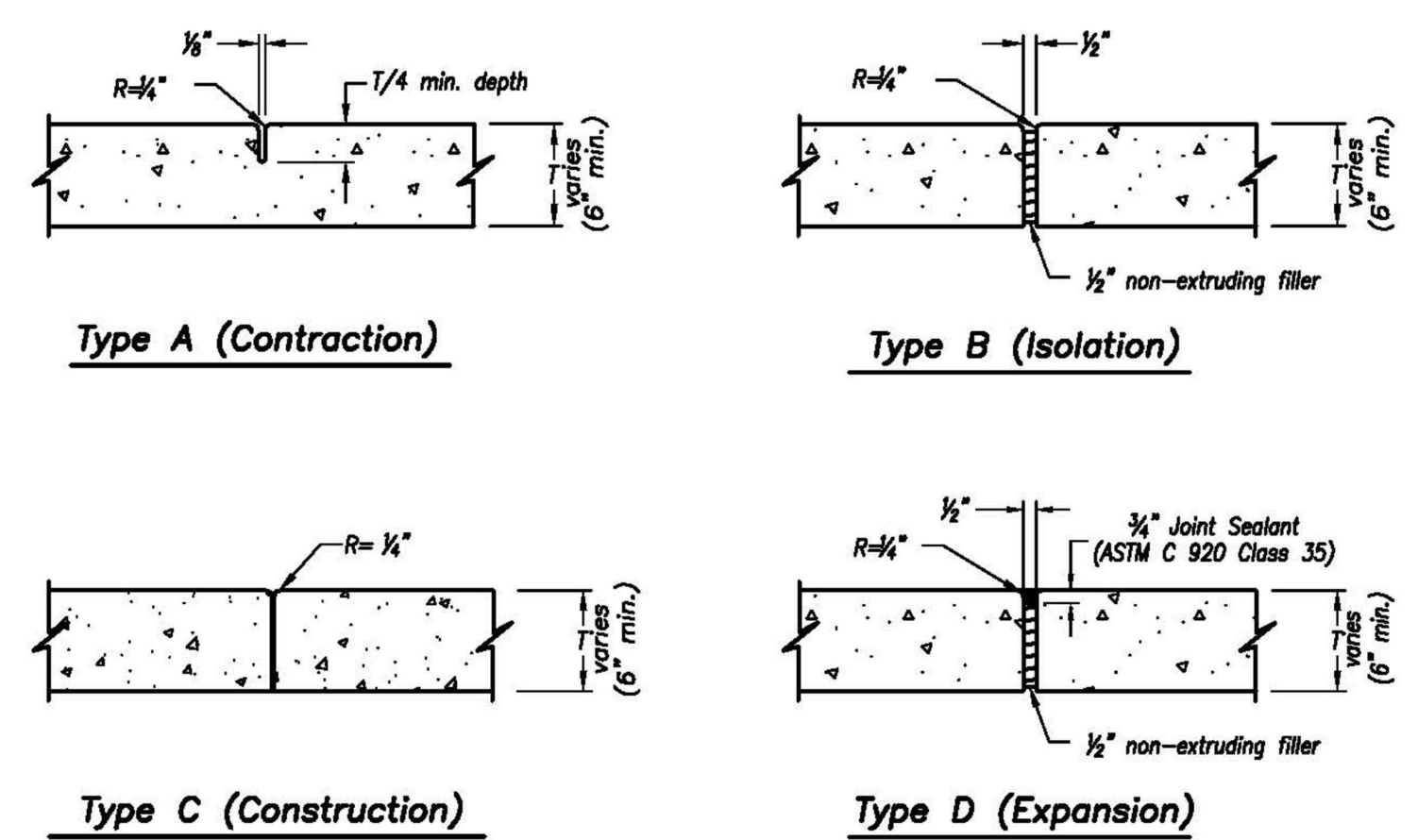
A



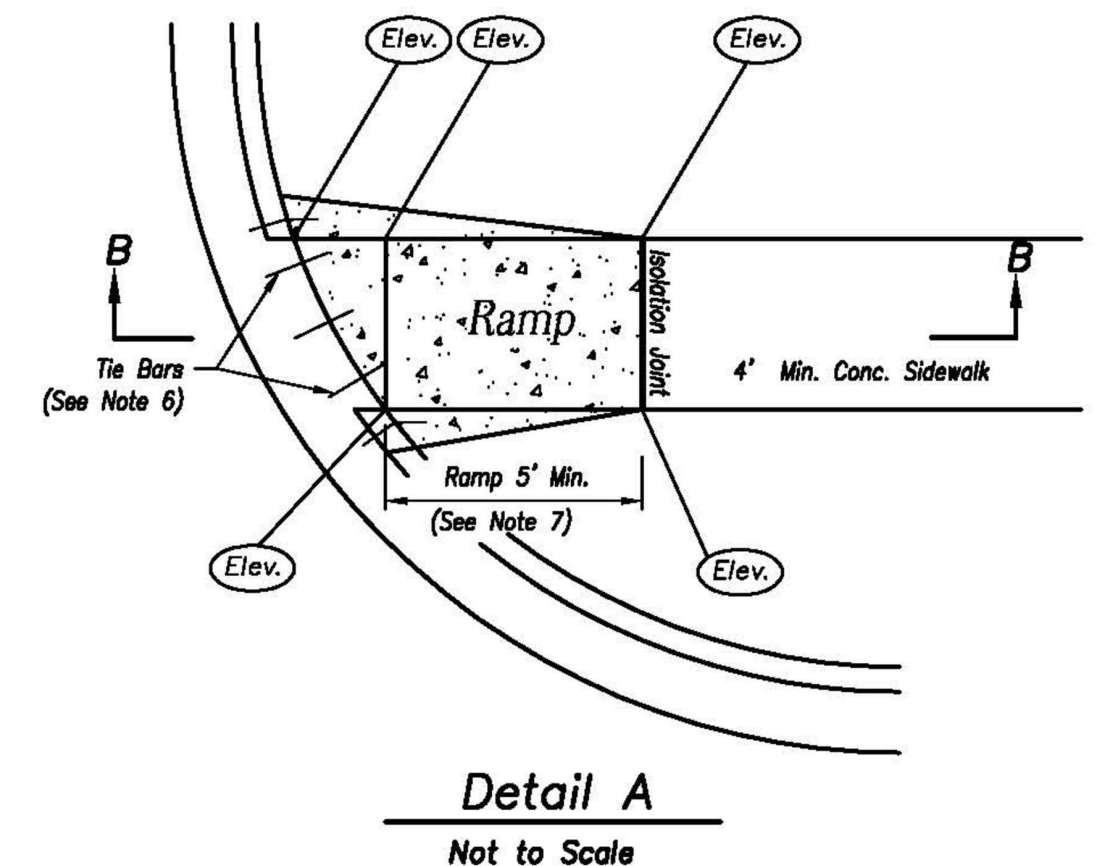
Section A-A
Not to Scale



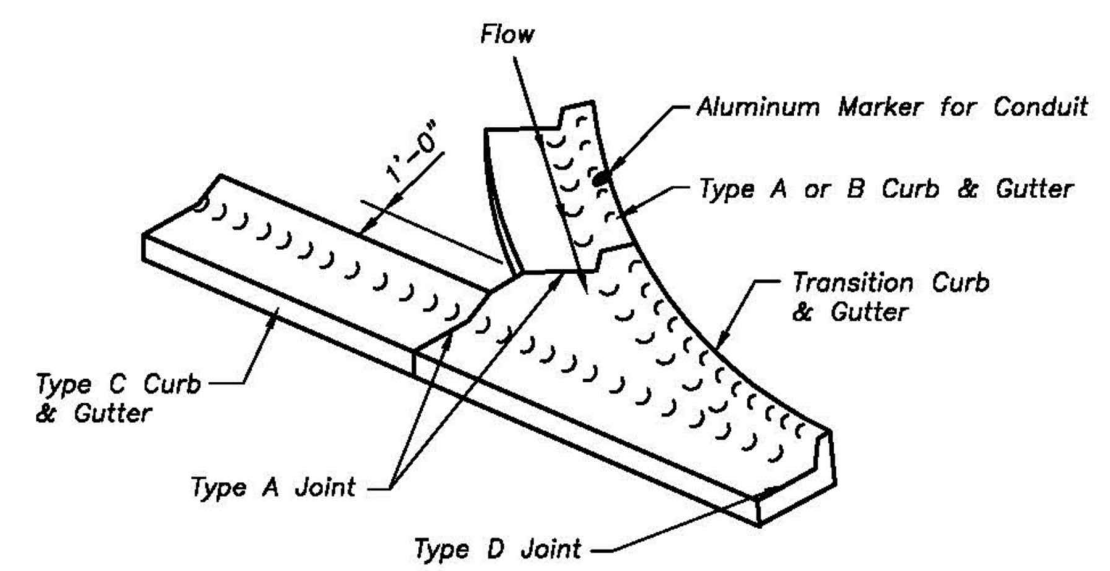
Section B-B (*)
* - See Note 4 for application of Detectable Warning Surface
Not to Scale



JOINT DETAILS
Not to Scale



Detail A
Not to Scale

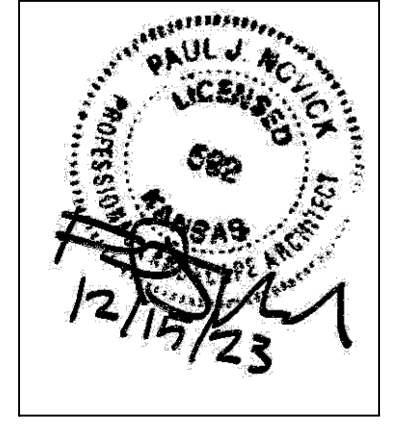


Detail B
Not To Scale

COMMERCIAL ENTRANCE DETAIL

Commercial Drive Notes:

1. Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted.
2. KCMMBAK Concrete shall be used throughout.
3. Concrete pavement shall be jointed with Type A joints. No jointed slab shall exceed 12' x 12'.
4. Detectable warning surfaces are not required at non-signalized entrances.
5. ADA compliance will be measured at points labeled (Elev.).
6. Install 18" tie bars #4 epoxy coated @ 18" o.c. and through wings as shown.
7. Sidewalk Ramp shall be lengthened to provide ADA compliant slope, but need not exceed 15'.
8. ADA maximum ramp slope = 1"/ft.
ADA maximum cross slope = 2%.
9. Top of curb elevations shall be shown at quarter points and curb returns.
10. Any additional steel reinforcement shall be approved by the City Engineer.
11. See Curb Replacement Detail for additional requirements.
12. Only 8" thick panels will be paid for as "RAMP". Sidewalk behind isolation joint will be paid for as "4" SIDEWALK".



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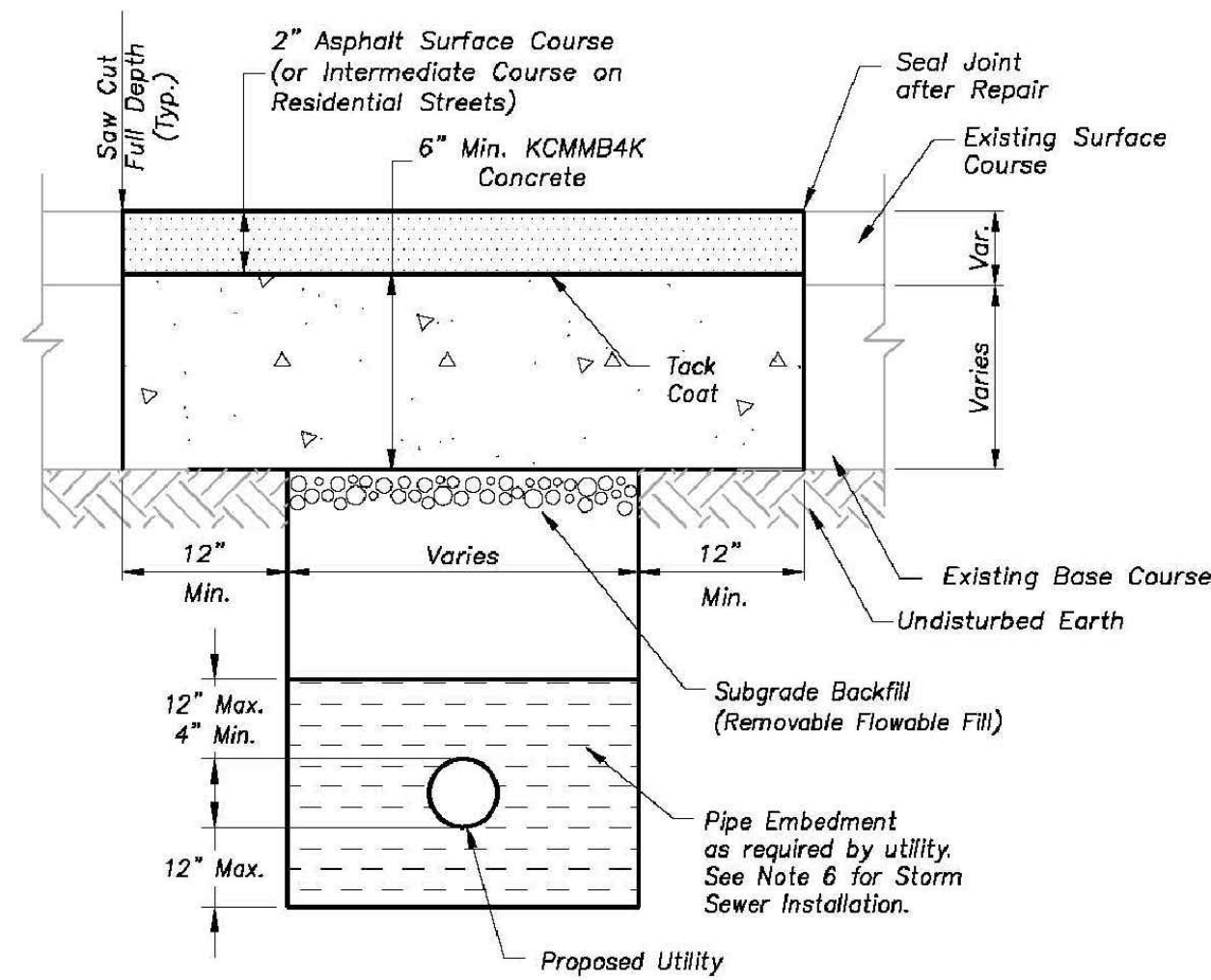
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STANDARD DETAIL

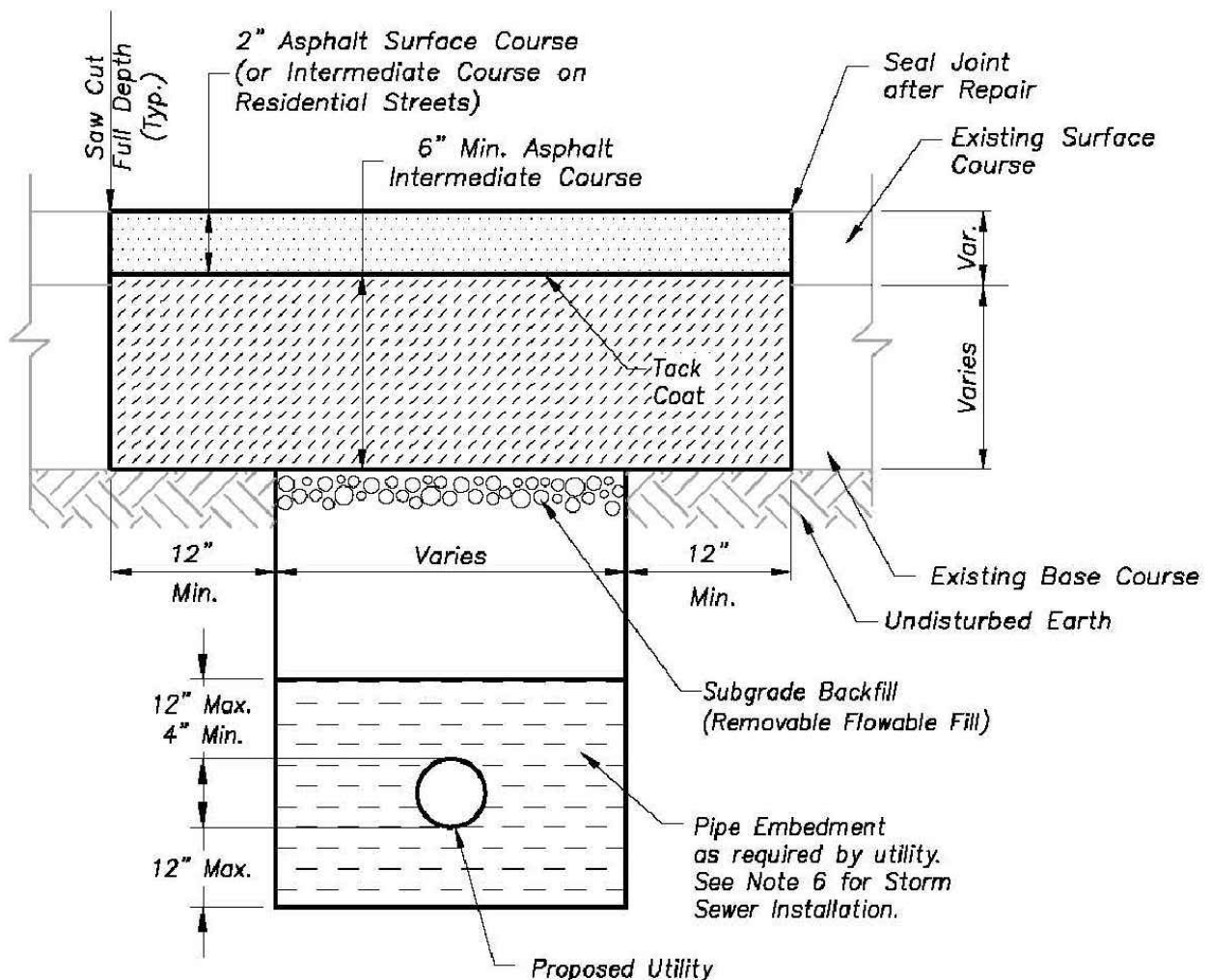
SP402

THE LINE SHOWN ABOVE IS WITHIN THE ORIGINAL SCALE OF THE SHEET'S ORIGINAL SCALE SIZE.

D

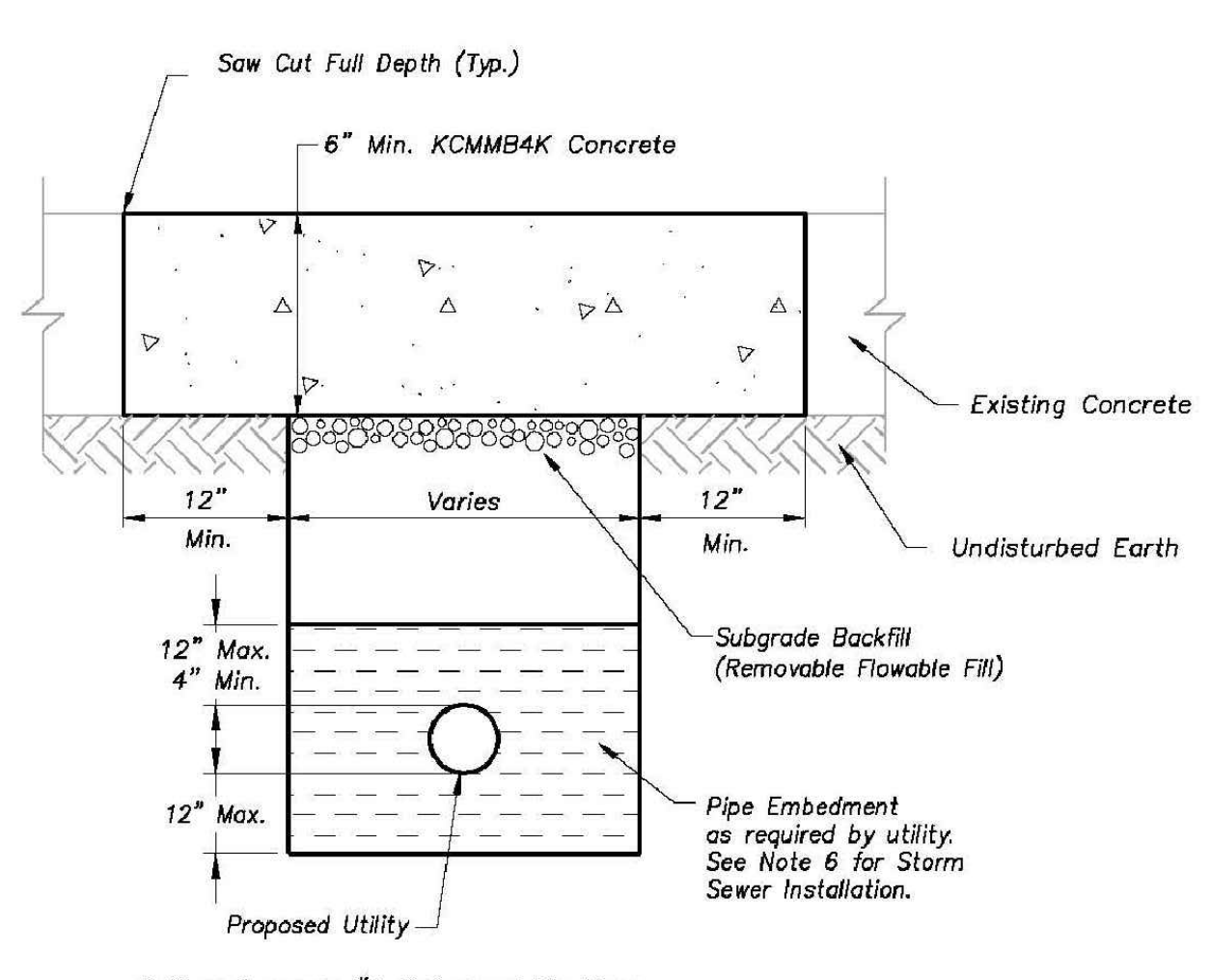


Asphaltic Concrete Street Repair Type I
 (Concrete Base /w Asphaltic Concrete Surface)

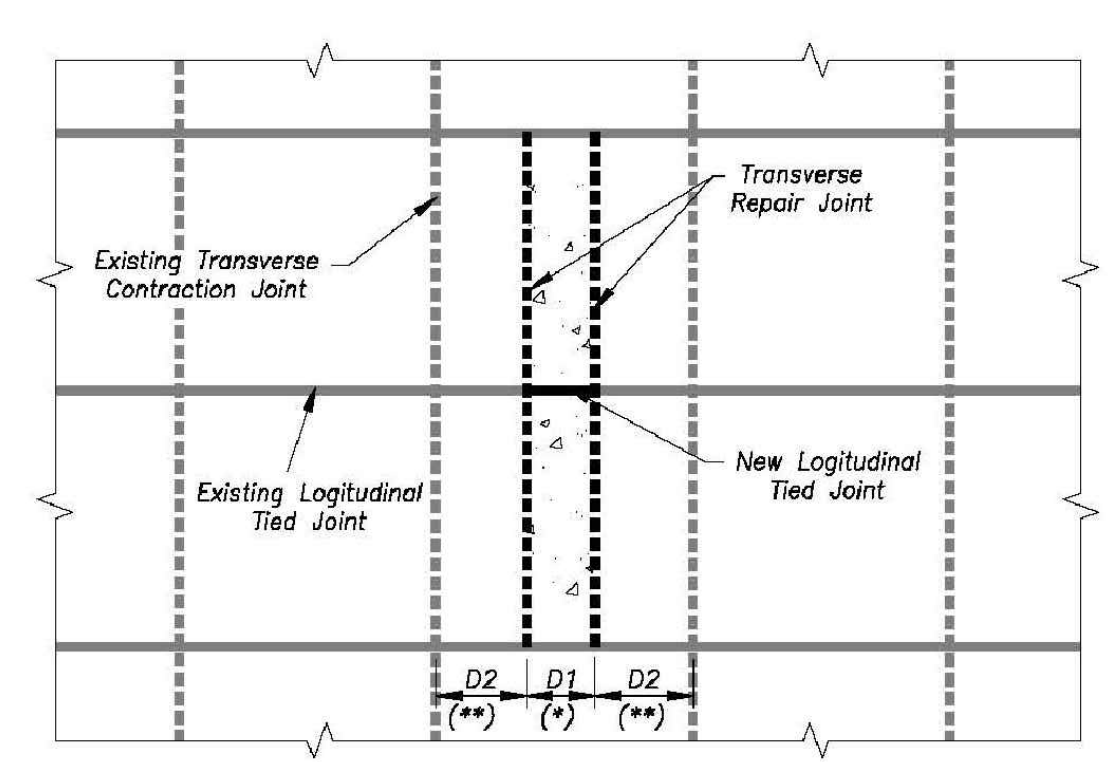


Asphaltic Concrete Street Repair Type II *
 (Full Depth Asphaltic Concrete)

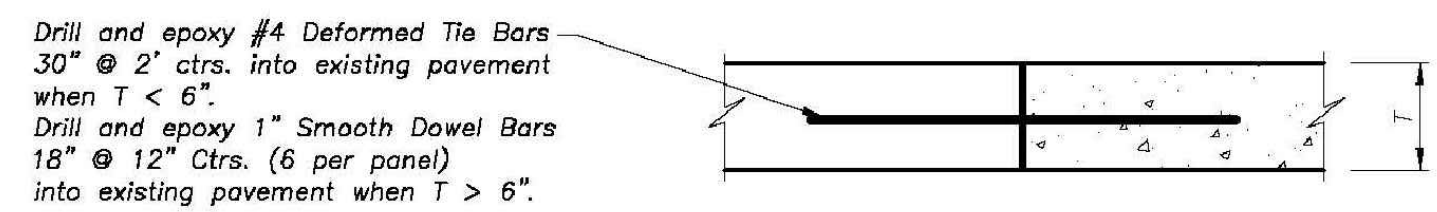
* - Type II Street Repair May be Used Only if Excavation Width Exceeds 6'



Portland Cement Concrete Street Repair **
 ** - May be Used Only on Existing Concrete Streets

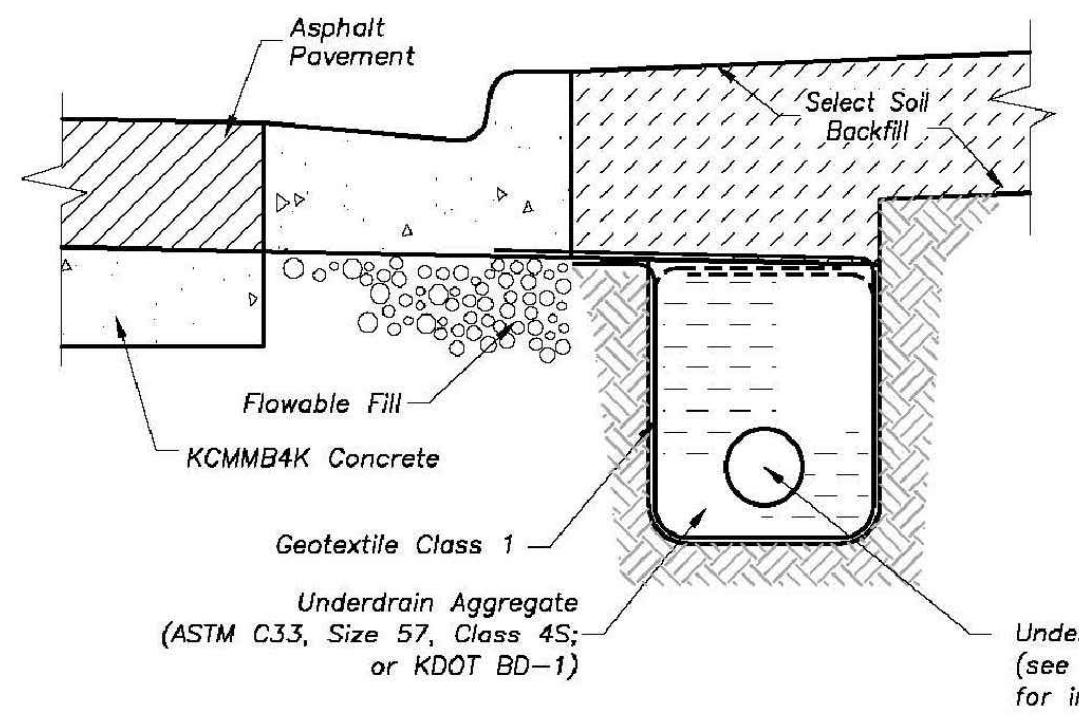


(*) - When street repair (D1) is greater than 50% of the slab, replace the entire slab.
 (***) - When the distance between the repair joint and the existing joint (D2) is less than 3', replace panel to the existing joint. (See Transverse Construction Joint Detail). When D2 is more than 3' - see Transverse Repair Joint Detail.

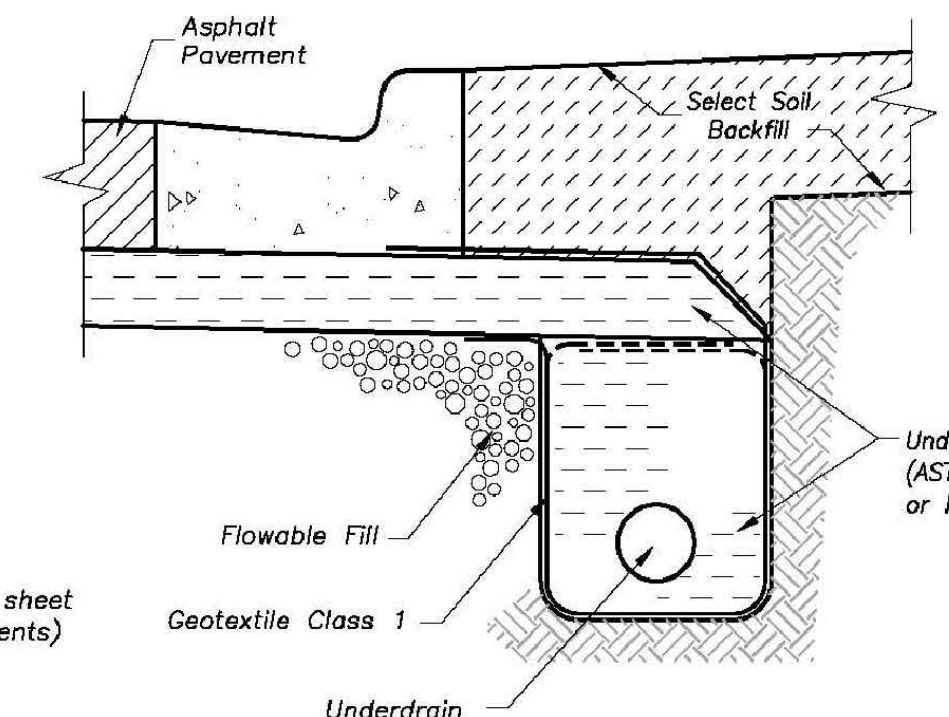


Transverse Repair Joint
 (See Sht.13 for additional Joint Details)

C

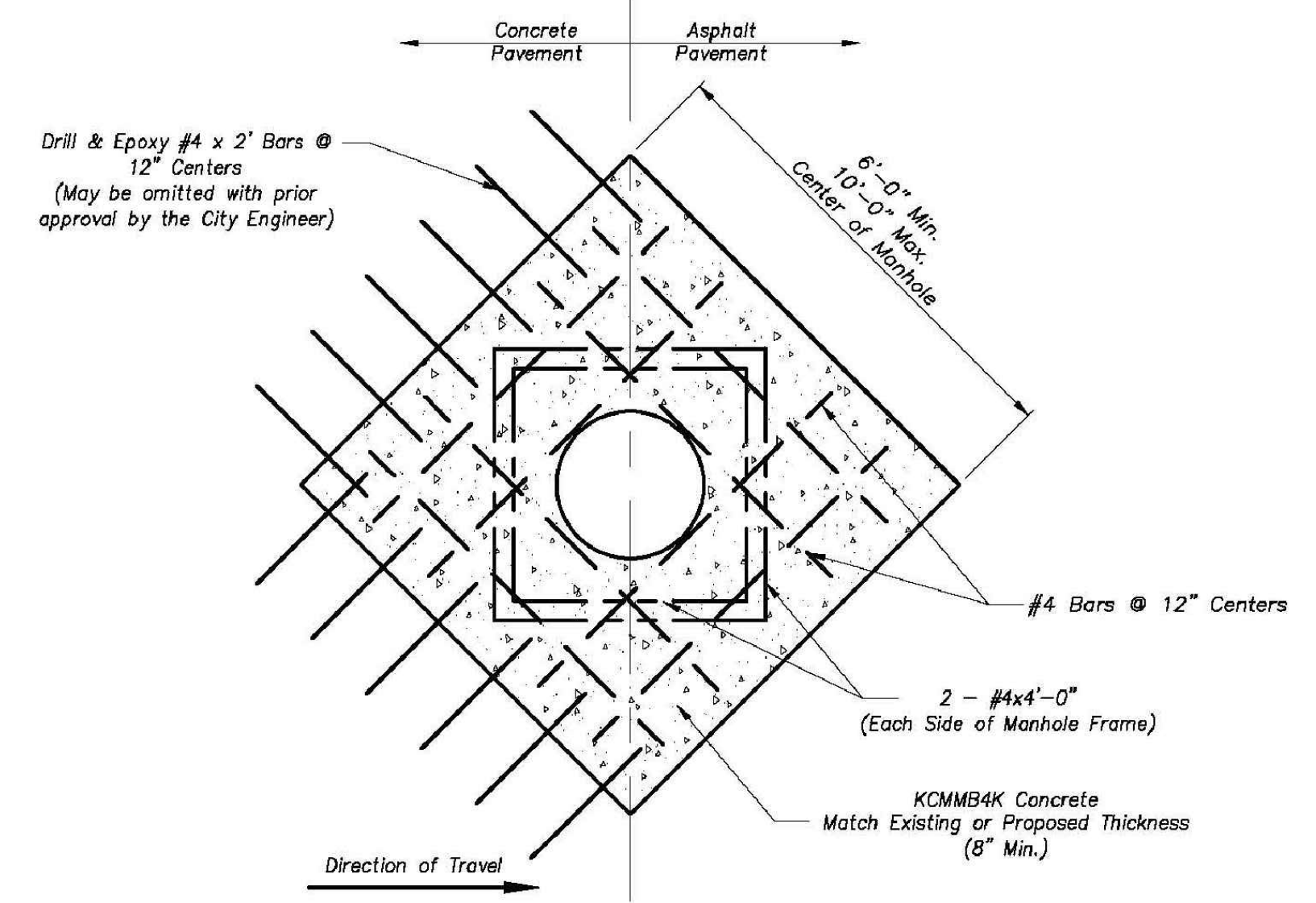


Pipe Underdrain Repair



Pipe Underdrain Repair with OP Special

B



Manhole in Paved Area ****

**** - Detail applies to improved thoroughfares and all improved concrete streets. For existing concrete streets, coordinate with existing joints.

Street Repair Notes:

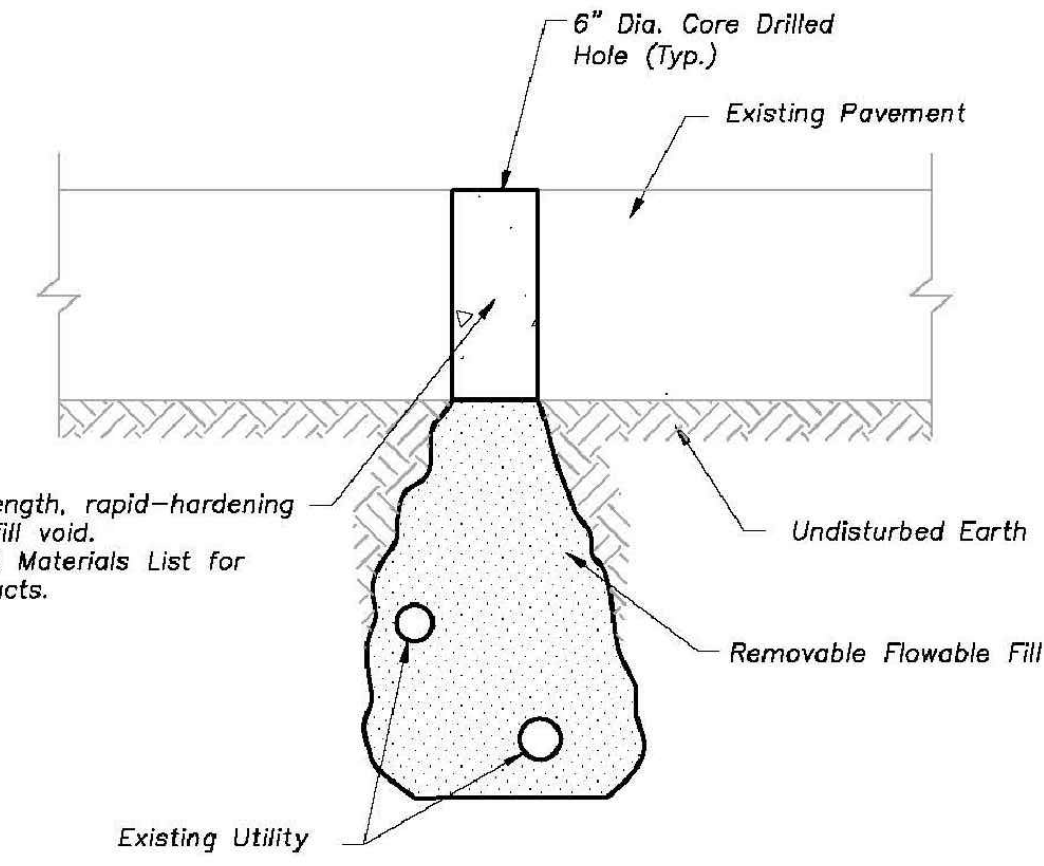
- Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted. In restoring the Right-of-Way, the Permittee guarantees its work and shall maintain it for 24 months following its completion.
- The Manual on Uniform Traffic Control Devices, the Overland Park Traffic Control Handbook for Street Maintenance and Construction Operations, and the latest edition of the O.P. Manual of Infrastructure Standards are incorporated except as otherwise noted.
- Any excavation left open overnight in any roadway shall be securely plated. Plates shall be properly anchored and all edges of the plate shall be ramped with asphalt surface mix to prevent rotting.
- All KCMMB4K Concrete, removable flowable fill and asphaltic concrete shall conform to OPMC Title 13.
- When trenching through OP Special Aggregate Base, flowable fill shall be used to backfill the trench to the elevation of the bottom of the OP Special Aggregate Base, then backfilled and compacted to the bottom of pavement with ASTM C33, Size 57, Class 4S aggregate.
- For Storm Sewer Installation pipe embedment shall be filled to 4" above the top of pipe.
- Permanent pavement markings shall be replaced with like materials within fourteen days after the pavement surface has been replaced, unless otherwise authorized by the City Engineer.

A

Repair Under Curb, Sidewalk or Driveway

Repair under curb/sidewalk/driveway notes:

- Curbs, sidewalks and driveways shall be sawed full depth, removed and replaced to nearest contraction or expansion joint.
- If adjacent section of curb, sidewalk or driveway is cracked, chipped or otherwise damaged, it shall also be removed and replaced to nearest joint.
- All concrete used in this work shall be KCMMB4K.

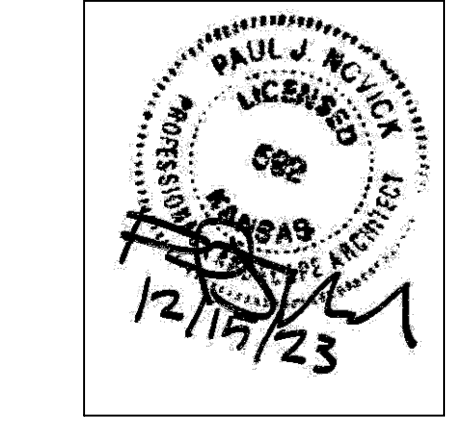


Utility Investigation Excavation Repair ***

*** - for repair areas under 1 s.f.

Utility Investigation Excavation Repair Notes:

- For repair areas greater than 1 s.f. or non-core drilled pavement cut see Street Repair Detail.
- Contact the City Representative regarding approved bonding agent.
- High Strength, rapid hardening concrete may be substituted with non-shrink grout, having a minimum compressive strength of 3000 psi in 24 hours and conforming to ASTM C1107, with a 2" cap of asphalt repair material.



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STANDARD DETAIL

SP403

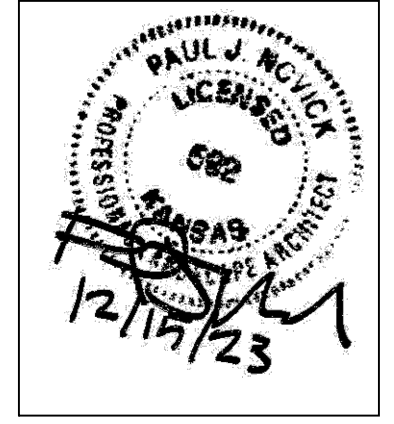
PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	SPACING/REMARKS
CANOPY TREES						
AS	6	Acer saccharum 'JFS-Caddo2'	FLASHFIRE SUGAR MAPLE	3" CAL	B&B	SPECIMEN QUALITY
GT	9	Gleditsia triacanthos f. inermis 'Skyline'	SKYLINE HONEYLOCUST	3" CAL	B&B	SPECIMEN QUALITY
PT	8	Populus tremuloides 'NE Arb'	PRAIRIE GOLD ASPEN	3" CAL	B&B	SPECIMEN QUALITY
QR	10	Quercus rubra	NORTHERN RED OAK	3" CAL	B&B	SPECIMEN QUALITY
UA	6	Ulmus americana 'Pioneer'	PIONEER ELM	3" CAL	B&B	SPECIMEN QUALITY
ORNAMENTAL TREES						
AT	5	Asimina triloba	PAWPAW	2" CAL	B&B	SPECIMEN QUALITY
CC	3	Cercis canadensis 'JN2' The Rising Sun	THE RISING SUN EASTERN REDBUD	2" CAL	B&B	SPECIMEN QUALITY
MV	5	Magnolia virginiana	SWEETBAY MAGNOLIA	2" CAL	B&B	SPECIMEN QUALITY
SR	5	Syringa reticulata 'Ivory Silk'	JAPANESE TREE LILAC	2" CAL	B&B	SPECIMEN QUALITY
CONIFER TREES						
JC	10	Juniperus chinensis 'Torulosa'	TORULOSA JUNIPER	6' HT.	B&B	
PS	11	Pinus Strobus 'Fastigiata'	EASTERN WHITE PINE	6' HT.	B&B	
TO	13	Thuja occidentalis 'Green Giant'	GREEN GIANT ARBORVITAE	6' HT.	B&B	

MEADOW MIX						
BC		Bouteloua curtipendula	SIDE OATS GRAMA	#1	CONT.	3'-0" O.C.
EC		Echinacea pallida	PALE PURPLE CONEFLOWER	#1	CONT.	3'-0" O.C.
PC		Phemeranthus calycinus	FAME FLOWER	#1	CONT.	3'-0" O.C.
SH		Sporobolus heterolepis	PRAIRIE DROPSEED	#1	CONT.	3'-0" O.C.
SL		Symphotrichum laeve	SMOOTH ASTER	#1	CONT.	3'-0" O.C.
SS		Schizachyrium scoparium 'Blue Heaven'	BLUE HEAVEN LITTLE BLUESTEM	#1	CONT.	3'-0" O.C.
TD		Tripsacum dactyloides	EASTERN GRAMA GRASS	#1	CONT.	3'-0" O.C.
TOTAL	33645 SF					
BMP MIX						
CC		Conoclinium coelestinum	MIST FLOWER	#1	CONT.	3'-0" O.C.
JE		Juncus effusus	COMMON RUSH	#1	CONT.	3'-0" O.C.
PV		Panicum virgatum	SWITCHGRASS	#1	CONT.	3'-0" O.C.
SP		Spartina pectinata	PRAIRIE CORDGRASS	#1	CONT.	3'-0" O.C.
VB		Vernonia baldwinii	WESTERN IRONWEED	#1	CONT.	3'-0" O.C.
TOTAL	4087 SF					
GRASS						
CD	APPROX 70,000 SF	Cynodon dactylon	TALL FESCUE	SEED		

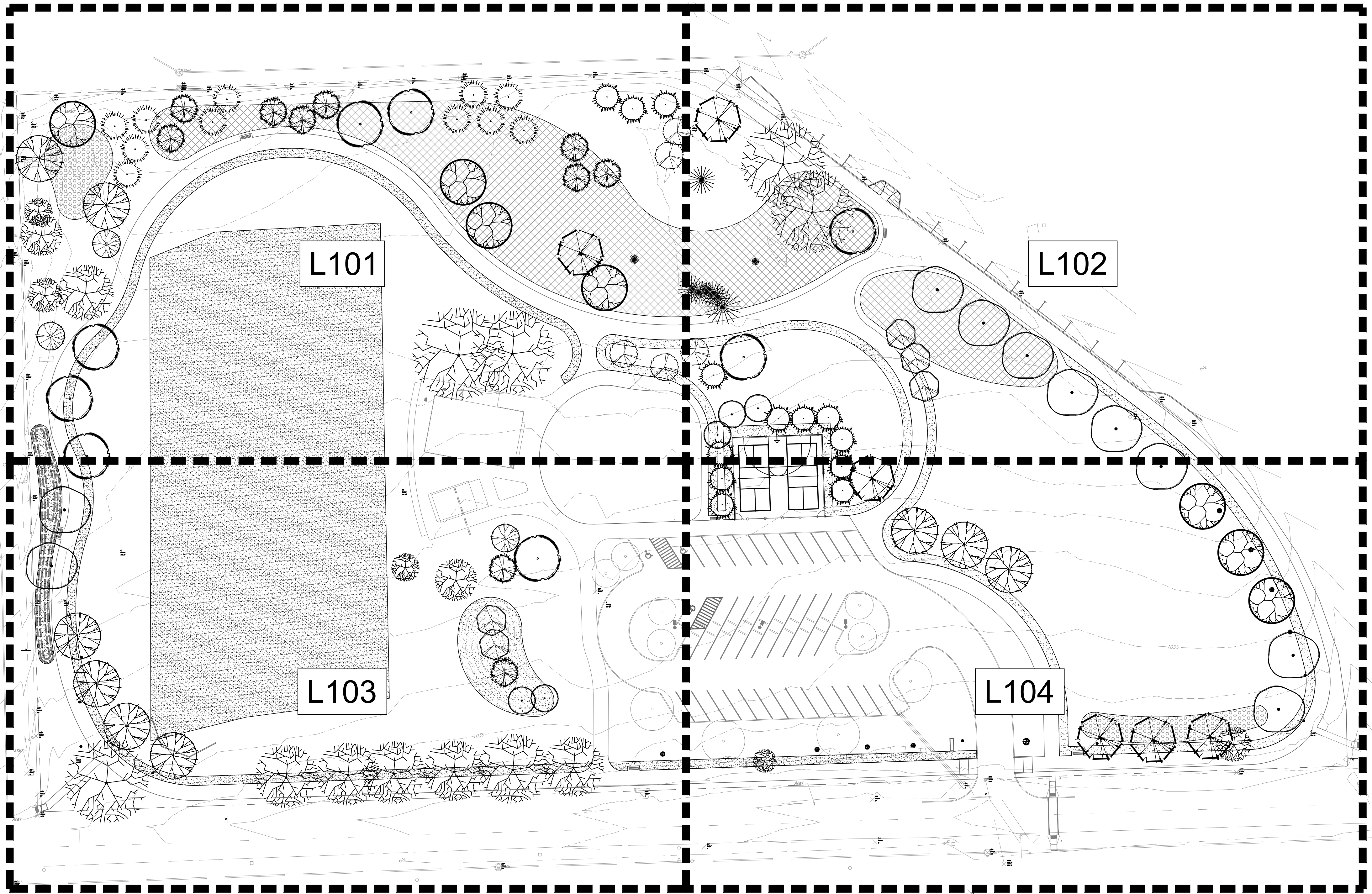
- PLANTING NOTES:**
- SEED ALL AREAS WITHIN CONTRACT LIMITS, NOT COVERED BY PAVING, BUILDINGS, OR SOD, UNLESS OTHERWISE NOTED.
 - PLANT QUANTITIES ARE FOR INFORMATION ONLY; DRAWING SHALL PREVAIL IF CONFLICT OCCURS.
 - NOTIFY LANDSCAPE ARCHITECT AFTER STAKING IS COMPLETED AND BEFORE PLANT PITS ARE EXCAVATED.
 - CONTRACTOR SHALL PLACE WEED BARRIER AND CEDAR MULCH AROUND ALL TREES AND IN ALL PLANTING BEDS TO A DEPTH OF 3".
 - KIND, SIZE AND QUALITY OF PLANT MATERIAL SHALL CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK, ANSI 260-1992, OR MOST RECENT EDITION.
 - THE CONTRACTOR SHALL REPORT SUBSURFACE SOIL OR DRAINAGE PROBLEMS TO THE LANDSCAPE ARCHITECT.
 - THE CONTRACTOR SHALL SHOW PROOF OF PROCUREMENT, SOURCES, QUANTITIES AND VARIETIES FOR ALL PERENNIALS, ORNAMENTAL GRASSES, AND ANNUALS WITHIN 21 DAYS FOLLOWING THE AWARD OF CONTRACT. TIMELY PROCUREMENT OF ALL PLANT MATERIAL IS ESSENTIAL TO THE SUCCESSFUL COMPLETION AND INITIAL ACCEPTANCE OF THE PROJECT.
 - SUBSTITUTIONS SHALL ONLY BE ALLOWED WHEN THE CONTRACTOR HAS EXHAUSTED ALL SOURCES FOR THE SPECIFIED MATERIAL, AND HAS PROVEN THAT THE SPECIFIED MATERIAL IS NOT AVAILABLE. THE CONTRACTOR MUST PROVIDE NAME AND VARIETY OF SUBSTITUTION TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO TAGGING OR PLANTING. SUBSTITUTIONS SHALL BE NEAREST EQUIVALENT SIZE OF VARIETY OF PLANT HAVING SAME ESSENTIAL CHARACTERISTICS.
 - ALL PLANT MATERIAL SHALL BE NURSERY GROWN, SOUND, HEALTHY, VIGOROUS AND FREE FROM INSECTS, DISEASE AND INJURIES, WITH HABIT OF GROWTH THAT IS NORMAL FOR THE SPECIES. SIZES SHALL BE EQUAL TO OR EXCEEDING SIZES INDICATED ON THE PLANT LIST. THE CONTRACTOR SHALL SUPPLY PLANTS IN QUANTITY AS SHOWN ON THE DRAWINGS.
 - STAKE OR PLACE ALL PLANTS IN FIELD AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT FOR APPROVAL BY THE OWNER PRIOR TO PLANTING.
 - THE VARIOUS PLANTS IN PLANT MIXES TO BE DISPERSED RANDOMLY SO ALL SPECIES ARE SPREAD THROUGHOUT THE DESIGNATED PLANTING AREAS.
 - APPROXIMATE TREE PLANTING DATE: BETWEEN SEPTEMBER AND OCTOBER 2023/4
 - ALL DISTURBED AREAS FROM CONSTRUCTION SHALL BE RE-SEEDDED UNLESS CALLED OUT AS OTHER PLANTING. A 6' SEEDING BUFFER IS TO BE USED ALONG NEW CONCRETE PATHS
 - ALL GRASSES, PERENNIALS AND ANNUALS HAVE BEEN VERIFIED BY THE NE KS REGION OF THE KANSAS STATE EXTENSION OFFICE FOR NATIVE CONFORMANCE AND NON INVASIVE SPECIES.

CONFLUENCE
 LANDSCAPE ARCHITECT
CONFLUENCE
 417 Delaware Street
 Kansas City, MO 64105
 816.531.7227
 www.thinkconfluence.com



Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL



MOHAWK PARK PHASE 2
 MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN

L100

THE LINE SHOWN ABOVE IS
 EITHER A MATCHLINE OR
 SHEET'S ORIGINAL SCALE SIZE

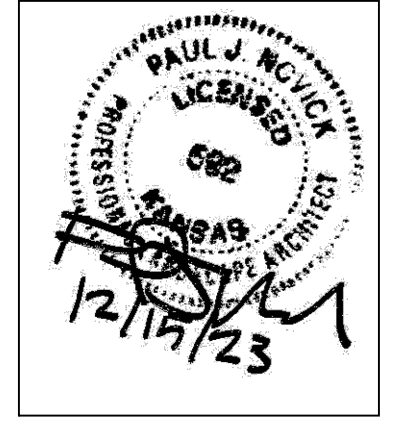
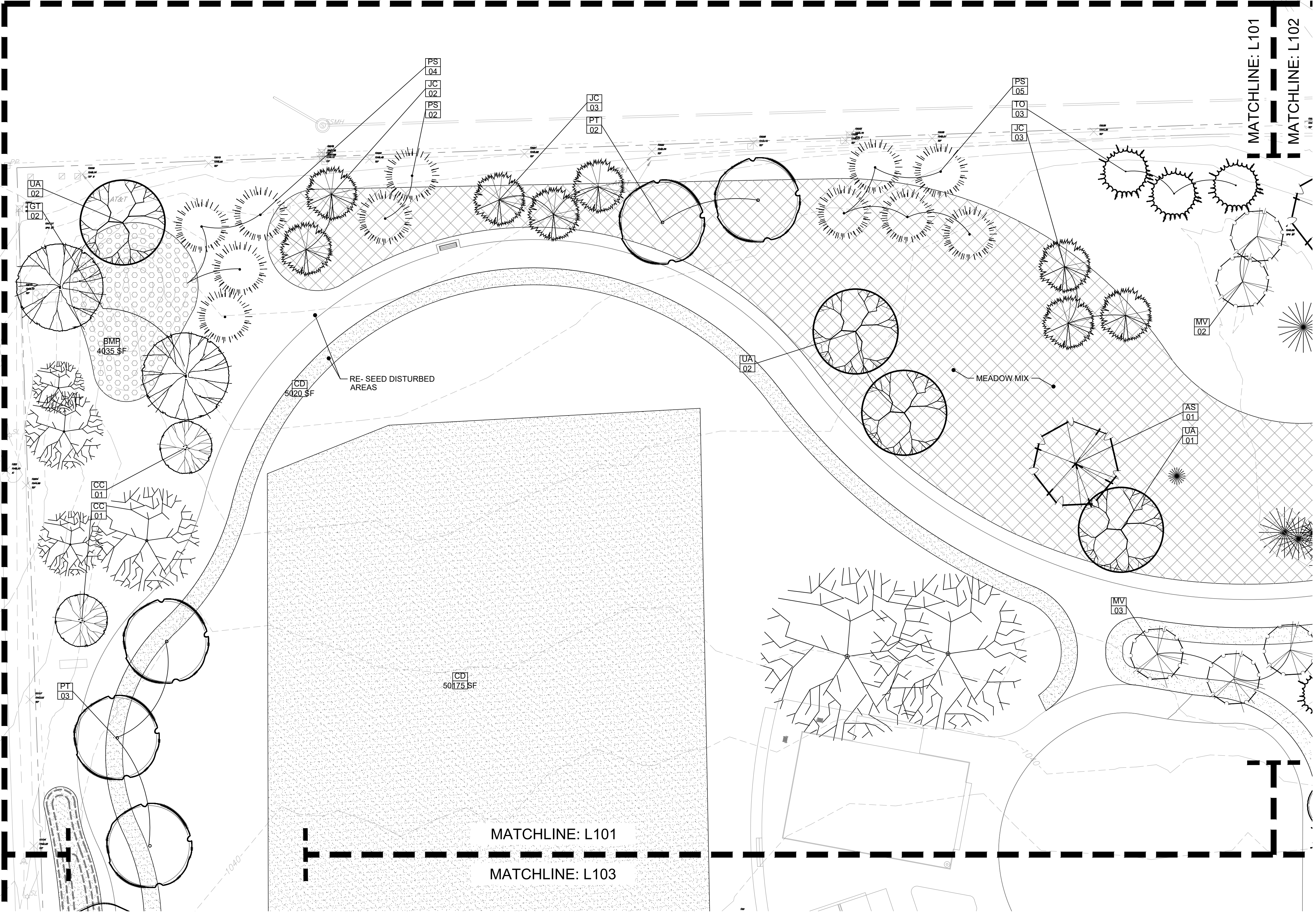
C M Y K
 THE SQUARES ABOVE ARE COLOR
 CHECKS. PRINT WITH THIS FILE.
 IF PRINTED CORRECTLY,

D

C

B

A



Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

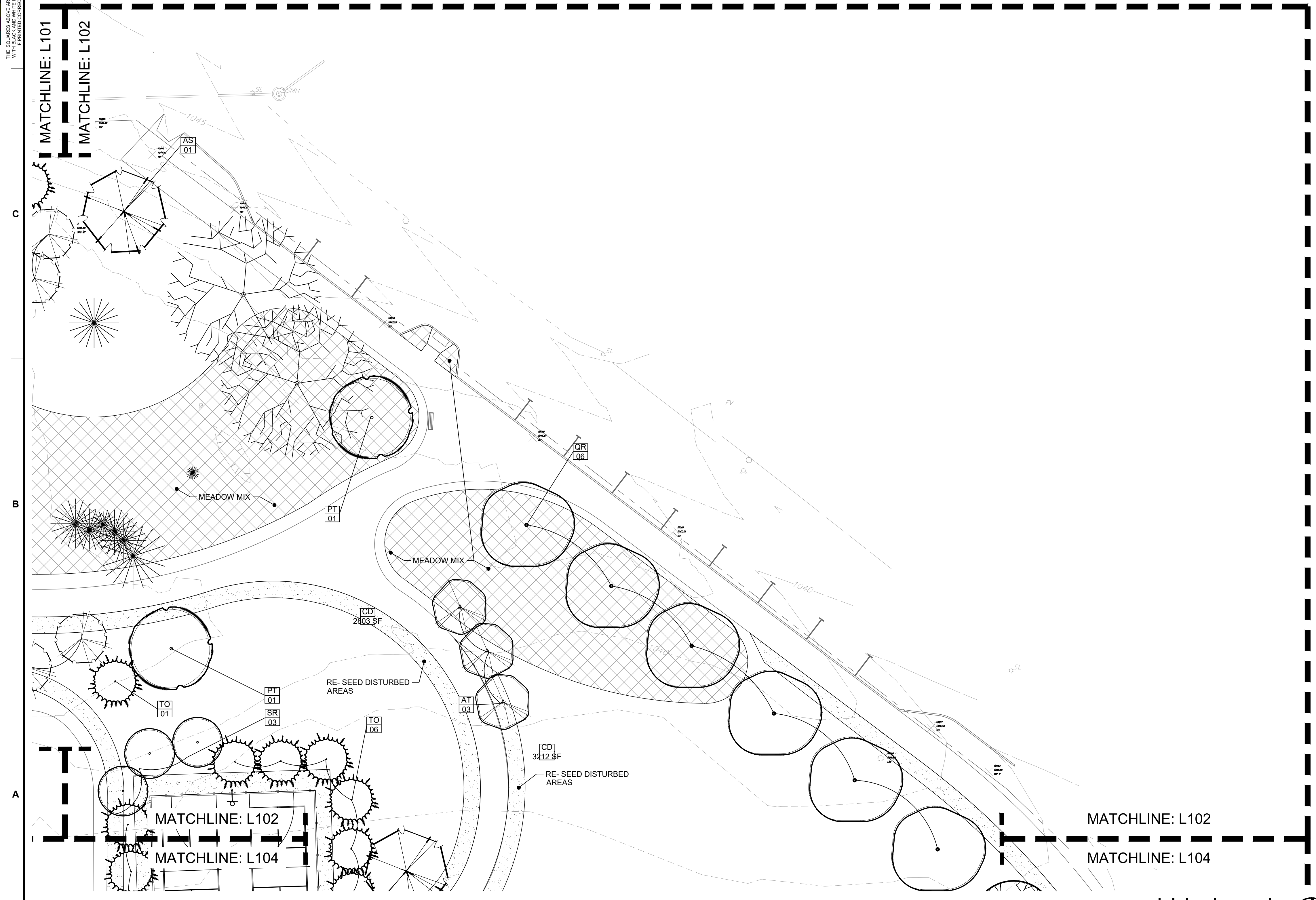
PLANTING PLAN
 ENLARGEMENT

L101

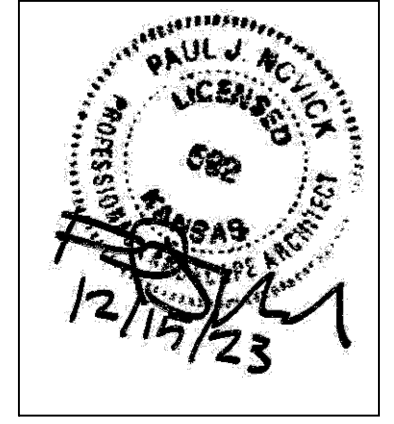
02 L101 PLANTING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS
 EITHER AN ENLARGEMENT
 OF THE ORIGINAL LAYOUT OR
 THE ORIGINAL LAYOUT

THE SQUARES ABOVE ARE COLOR
 WITH AN AREA OF 100 SQUARE FEET
 IF PRINTED CORRECTLY



03
 L102 PLANTING PLAN ENLARGEMENT



Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

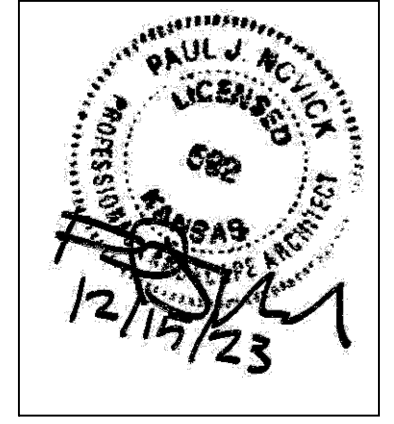
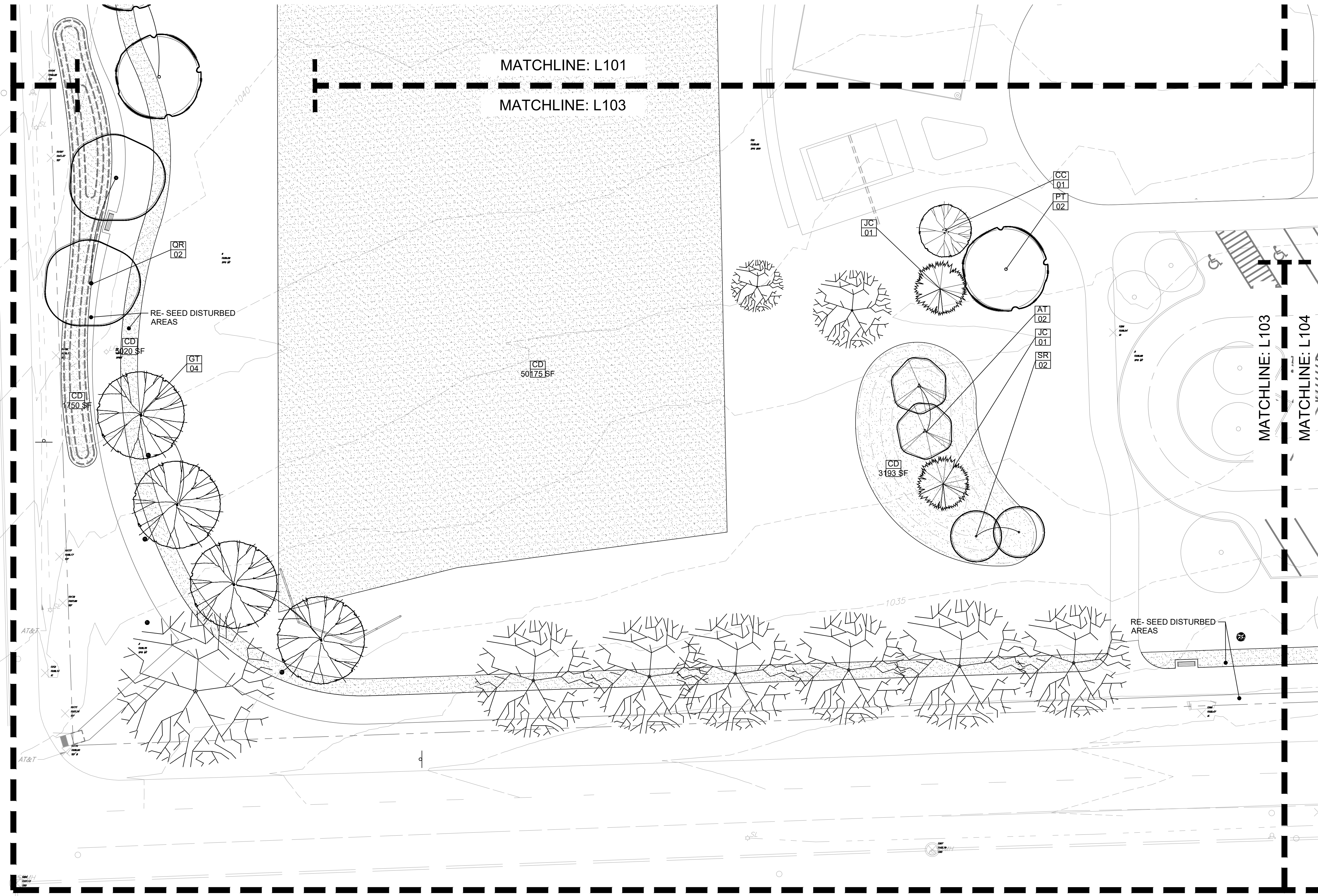
PLANTING PLAN
 ENLARGEMENT

L102

THE LINE SHOWN ABOVE IS
 ENLARGED FOR CLARITY.
 IF PROVIDED CORRECTLY,
 THE SQUARES ABOVE ARE COLOR
 WITH THE CORRESPONDING
 LETTERS AND NUMBERS.

C M Y K

D
C
B
A



Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN
 ENLARGEMENT

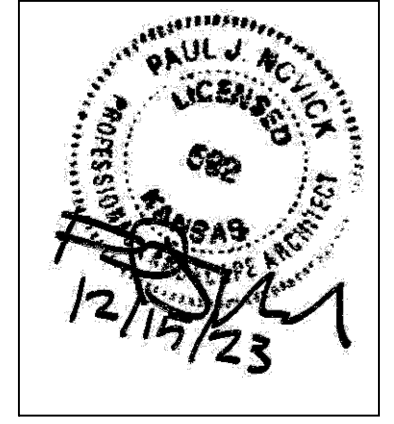
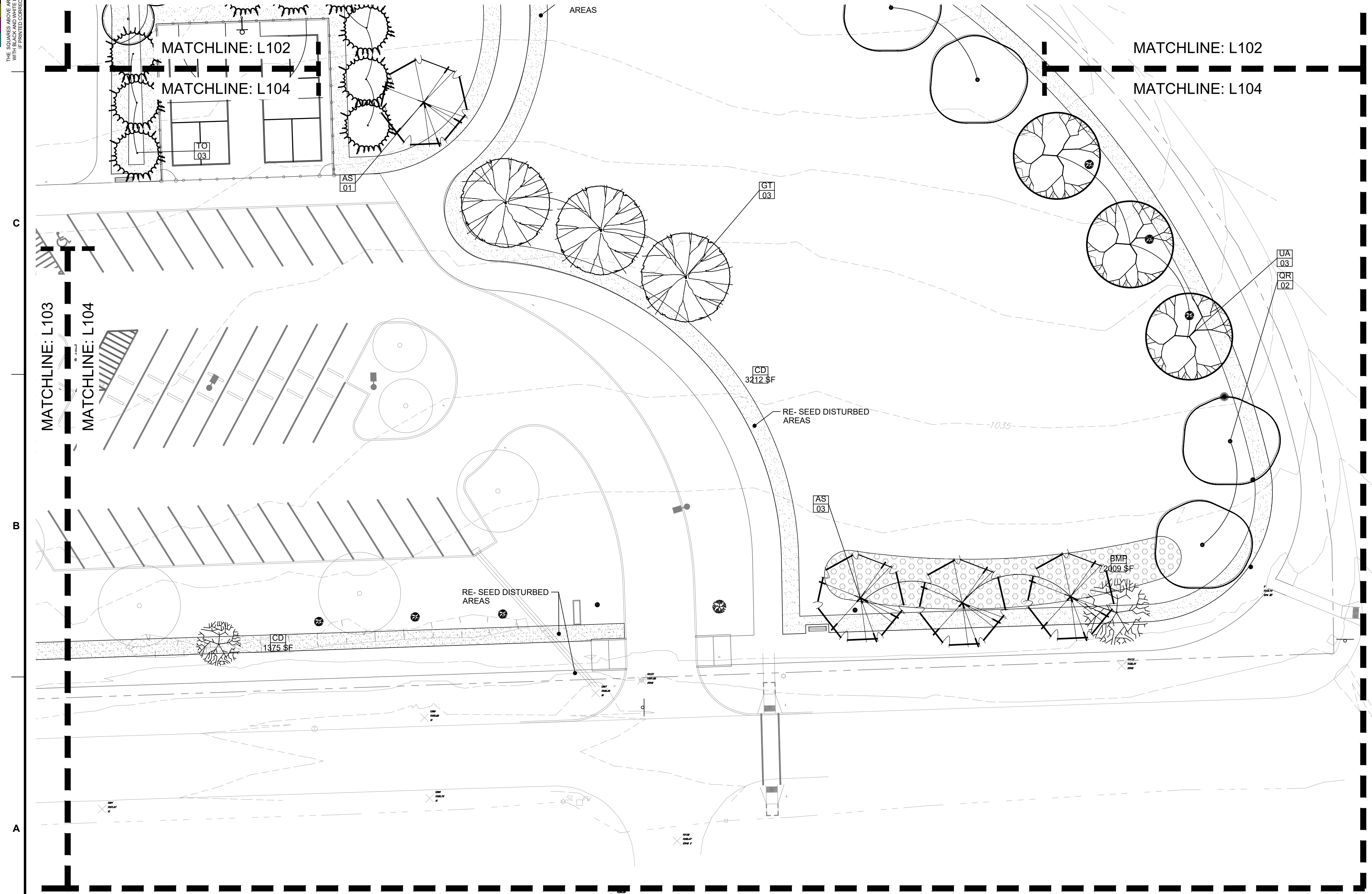
L103

04
 L103 PLANTING PLAN ENLARGEMENT

THE LINE SHOWN ABOVE IS
 ENLARGED FOR CLARITY.
 IF PRINTED CORRECTLY,
 THE SQUARES ABOVE ARE COLOR
 WITH NO LINE WEIGHT DIFFERENCES.
 IF PRINTED CORRECTLY,
 THE SQUARES ABOVE ARE COLOR
 WITH NO LINE WEIGHT DIFFERENCES.
 IF PRINTED CORRECTLY,
 THE SQUARES ABOVE ARE COLOR
 WITH NO LINE WEIGHT DIFFERENCES.

D

C
 B
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Revision Schedule

No.	Date	Description
01	12-15-2023	FDP SUBMITTAL

MOHAWK PARK PHASE 2

MISSION KS PARKS AND RECREATION
 6090 WOODSON ST. MISSION, KS 66202

Project Number	23093
Issue	00000
Date	YYYY-MM-DD

PLANTING PLAN
 ENLARGEMENT

L104

05
 L104 PLANTING PLAN ENLARGEMENT



1

2

3

4

SECTION 8

Log of Modifications and Amendments

Modifications to the SWP2 Plan shall be made to better control the site erosion and sediment discharges based on field conditions or site phasing that was not considered during SWP2 Plan development. The permittee shall indicate the changes on the erosion and sediment control plan sheets, maintain a log showing dates of all SWP2 Plan modifications, and the name and title of the person authorizing the modification. Changes to the SWP2 Plan that are not amendments are considered modifications and do not need to be submitted to KDHE. Modification of site erosion and sediment controls based on field conditions or site phasing do not require preparation or approval by a professional; however, modifications that involve the relocation or reconfiguration of any sedimentation basin or corresponding outlet structure shall be prepared under the supervision of a licensed or certified professional

The SWP2 Plan shall be amended:

- *When a change in the project scope increases the amount of soil disturbed by more than 1.0 acre;*
- *When stormwater will discharge into a surface water not originally receiving stormwater from the permitted site construction activities; and*
- *When determined as significant by KDHE upon notification of any discovery of contaminated soil or groundwater, potential historic or archeological sites, or threatened or endangered species during the construction that was not identified and addressed in the SWP2 Plan*

For projects requiring an amendment the permittee will need to submit a letter explaining the changes, a modified erosion and sediment control plan, and a new NOI form indicating the new acreage with the originally issued State and Federal permit numbers. Soil disturbing activities shall not occur on the added or discovered areas until Authorization from KDHE is provided. Amendments need to be submitted at least 60 days prior to implementing the proposed changes at the site. Authorization for the revised project will be indicated in similar fashion as the initially authorized NOI and a copy of the newly authorized NOI will be provided to the permittee. Amendments to the SWP2 Plan shall be prepared under supervision of a Licensed Kansas professional engineer, geologist, architect, or landscape architect or a Certified Professional in Erosion and Sediment Control (KDHE 2017).

SECTION 9

Local Regulations & Additional Permits

Local Ordinances can be located here for reference only. Additional permits (i.e. 404, NWP, grading permits if required, etc.) can be kept here for reference only.

City of Mission, KS
Wednesday, January 5, 2022

Chapter 500. Model or Standard Code Adoptions

Article XV. Stormwater Management Criteria

Section 500.190. APWA Storm Drainage Criteria — Adoption.

[Ord. No. 1124 §30, 8-25-2004; Ord. No. 1182 §1, 11-9-2005]

- A. There is hereby incorporated by reference for the purpose of implementing and regulating stormwater management criteria for development in the City of Mission, Kansas, those certain criteria and specifications known as Standard Specifications and Design Criteria, Division V, Section 5600-Storm Drainage Systems and Facilities, adopted August, 2005 by the Kansas City Metropolitan Chapter of the American Public Works Association, hereinafter referred to as APWA 5600. No fewer than three (3) copies of APWA 5600 shall be marked or stamped in the manner provided by K.S.A. Sections 12-3009 — 12-3012, and to which shall be attached a copy of this Section and shall be filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.
- B. Any person violating any provision of such criteria shall be punished as provided in Section **100.100** of the Mission City Code.

Section 500.195. APWA Erosion Sediment Control Criteria — Adoption.

[Ord. No. 1181 §1, 11-9-2005]

There is hereby incorporated by reference for the purpose of implementing and regulating erosion and sediment control for development in the City of Mission, Kansas, those certain criteria and specifications known as Standard Specifications and Design Criteria, Division V, Section 5100- Erosion and Sediment Control, adopted August, 2003 by the Kansas City Metropolitan Chapter of the American Public Works Association, hereinafter referred to as APWA 5100. No fewer than three (3) copies of APWA 5100 shall be marked or stamped in the manner provided by K.S.A. Sections 12-3009 — 123012, and to which shall be attached a copy of this Section filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

Section 500.200. City of Mission Storm Management Criteria — Adoption.

[Ord. No. 1124 §30, 8-25-2004]

- A. There is hereby incorporated by reference for the purpose of implementing and regulating stormwater management criteria for development in the City of Mission, Kansas, that certain criteria known as Stormwater Management Criteria, August 2004 Edition, prepared by the Public Works Department of the City of Mission, Kansas. No fewer than three (3) copies of the Stormwater Management Criteria shall be marked or stamped in the manner provided by K.S.A. Sections 12- 3009 — 12-3012, and to which shall be attached a copy of this ordinance, shall be filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

- B. Any person violating any provision of such criteria shall be punished as provided in Section **100.100** of the Mission City Code.

Section 500.210. APWA Construction and Material Specification Section — Adoption.

[Ord. No. 1320 §2, 2-17-2010]

- A. There is hereby incorporated by reference for the purpose of implementing and regulating stormwater management criteria for development in the City of Mission, Kansas, that certain criteria known as "Division II Construction and Material Specifications Section 2150 Erosion and Sediment Control" approved and adopted on May 21, 2008 published by the Kansas City Metropolitan Chapter American Public Works Association, herein referred to as Section 2150. No fewer than three (3) copies of Section 2150 shall be marked or stamped in the manner provided by K.S.A. Sections 12- 3009 — 12-3012 and to which shall be attached a copy of this Section, shall be filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.
- B. Any person violating any provision of such criteria shall be punished as provided in Section **100.100** of the Mission City Code.

Section 500.215. Manual of Best Management Practices For Stormwater Quality — Adoption.

[Ord. No. 1321 §2, 2-17-2010]

- A. There is hereby incorporated by reference for the purpose of implementing and regulating stormwater management criteria for development in the City of Mission, Kansas, that certain criteria known as the Manual of Best Management Practices for Stormwater Quality and all appendices dated August 2009 published by the Mid-America Regional Council and the Kansas City Chapter of the American Public Works Association, herein referred to as the BMP Manual. No fewer than three (3) copies of the BMP Manual shall be marked or stamped in the manner provided by K.S.A. Sections 12-3009 — 12-3012, and to which shall be attached a copy of this Section, shall be filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.
- B. Any person violating any provision of such criteria shall be punished as provided in Section **100.100** of the Mission City Code.

SECTION 10

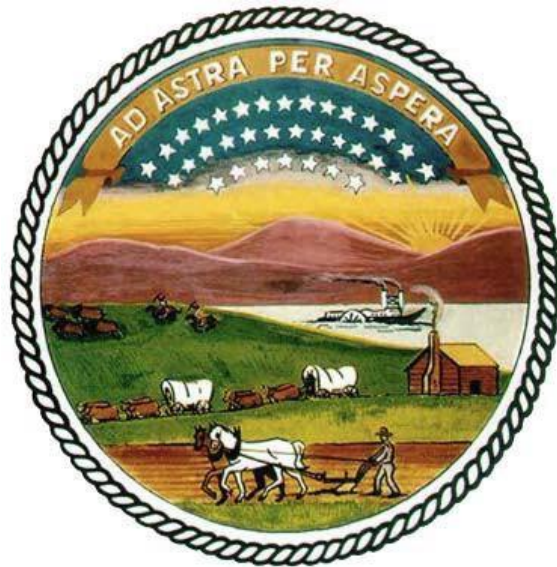
Spill Response

Kansas Spill Notification instructions and requirements can be found in this section which include but is not limited to K.A.R 28-48 and K.S.A. 65-171v. Spill Report forms can also be found in this section.

County Emergency Manager contact information can be found at

<http://www.kansastag.gov/kdem.asp?PageID=200>.

KANSAS SPILL NOTIFICATION



Kansas Department of Health and Environment
In partnership with:
Kansas Division of Emergency Management
Kansas Corporation Commission

December 1, 2014

<http://www.kdheks.gov/spill/>



To protect and improve the health and environment of all Kansans

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SPILL REPORTING INSTRUCTIONS:

The spiller is responsible for reporting spills that impact the soil or waters of the state. Hazardous materials that are released in the air that exceed federal reportable quantities must **also** be reported to the state reporting number. The federally listed chemicals and reportable quantities (RQ) can be obtained at www.epa.gov/emergencies under the tab of “List of Lists”. Kansas regulations and statutes regarding spill reporting are included on pages 8 through 9 of this document. A spiller may call one number 24/7 to make the required verbal notification to the state of Kansas.

Kansas Spill Reporting Number (24/7)

785-291-3333

LEPC/ CEPR

If the release is not contained or threatens the health or safety of the local population, the Local Emergency Planning Committee (LEPC) within the county of the release must be notified first by dialing 911. The LEPC point of contact in most counties is the county emergency manager.

Whenever a spill exceeds the RQ of federally listed hazardous materials, the LEPC must be notified and the Kansas Commission on Emergency Planning & Response (CEPR) requires a follow up written report within seven days after the verbal report. The Kansas Division of Emergency Management (KDEM) facilitates the follow up written report which is called a Form A report. KDEM also requires a follow up Form A report for petroleum spills that exceed 110 gallons.

KCC Regulated Spills

Spills that occur at oil and gas wells are reportable to the Kansas Corporation Commission (KCC). Spillers may call the same number above to be directed to the KCC reporting numbers (select option 1 and then option 3) or may call the KCC district offices direct.

The KCC district office numbers are listed on page 7.

Call the spill line shown above and select option 1 if an oil spill flows off a lease into a waterway after normal business hours and report the spill to the National Response Center (NRC).

National Response Center

Whenever a spill exceeds the RQ of federally listed hazardous materials, it must also be reported to the National Response Center (NRC). Federal law also requires that any oil spill that has impacted or threatens a waterway must be reported to the NRC. EPA Region 7 Emergency Response Branch personnel monitor the NRC reports and may call the spiller back for more information.

NRC 24-hour number

800-424-8802

OTHER USEFUL TELEPHONE NUMBERS

Kansas Division of Emergency Management (KDEM)

24-Hour All Hazards Reporting Number (785) 291-3333
Main phone line (non-emergency/admin) (785) 274-1409
Fax: (785) 274-1426

Kansas Fire Marshal Office

Hazmat Regional Response Team Request (866)-KHAZMAT or (866) 542-9628
(Local authorities may request mutual aid response)

Environmental Protection Agency (EPA)

Region 7 Kansas City Office 24-Hour Spill Number (913) 281-0991

Chemtrec (Chemical information of spilled material if registered) (800) 262-8200

Centers for Disease Control - ATSDR

For Health Effects of Spilled Material (Hours from 8-8, M-F) (800) 232-4636
Emergency after business hours- Contact EPA Region 7 Spill Line (913) 281-0991

Kansas Highway Patrol

24-Hour Dispatch (785) 827-4437
Turnpike (316) 682-4537

Kansas Bureau of Investigation

(Statewide crime number includes response to meth labs) (785) 296-8200

Kansas Department of Health and Environment

Bioterrorism, Biohazards and Disease Issues

Epidemiologist (877) 427-7317

Municipal Sewage Releases & Public Water Supply Problems

KDHE District Office: (see District List page 6)
(After Business Hours) (785) 296-1679

KANSAS POISON CONTROL CENTER

University of Kansas Hospital
Kansas Poison Control Center Hotline (800) 222-1222
TDD/TYY (866) 238-0677

WILDLIFE AND FISH KILLS

KDHE Fish Kill Notification in public waters
(After Business Hours)

(see District List page 6)
(785) 296-1679

Kansas Department of Wildlife, Parks & Tourism

Pratt- Operations Office

(620) 672-5911

Topeka- Administration Office

(785) 296-2281

Operation Game Thief

(877) 426-3843

U.S. Fish & Wildlife Service

(785) 539-3474

AGRICULTURAL RELATED SPILLS

Pesticides and Fertilizer Spills

Notify Spill Line (24hrs/7day week)

(785) 291-3333

Kansas Department of Agriculture (normal business hours)

Technical consultation, regulates applicators and facilities

(785) 564-6688

National Pesticide Information Center (npic@ace.orst.edu)

(800) 858-7378

Animal Waste Releases/Spills:

KDHE Livestock Waste Management Program

(785) 296-6432

KDHE District Office

(see District List page 6)

(After Business Hours)

(785) 296-1679

FOOD SAFETY

Kansas Department of Agriculture

Grocery & convenience stores, distribution, transportation

Restaurants, fast food, taverns/clubs, schools, street vendors

(785) 564-6767

EMERGENCY After normal business hours:

(800) 915-6163

(press "1" during the message, when calling the emergency number)

OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA)

Worker exposure to hazardous materials or environmental hazards:

OSHA Area Office for Kansas

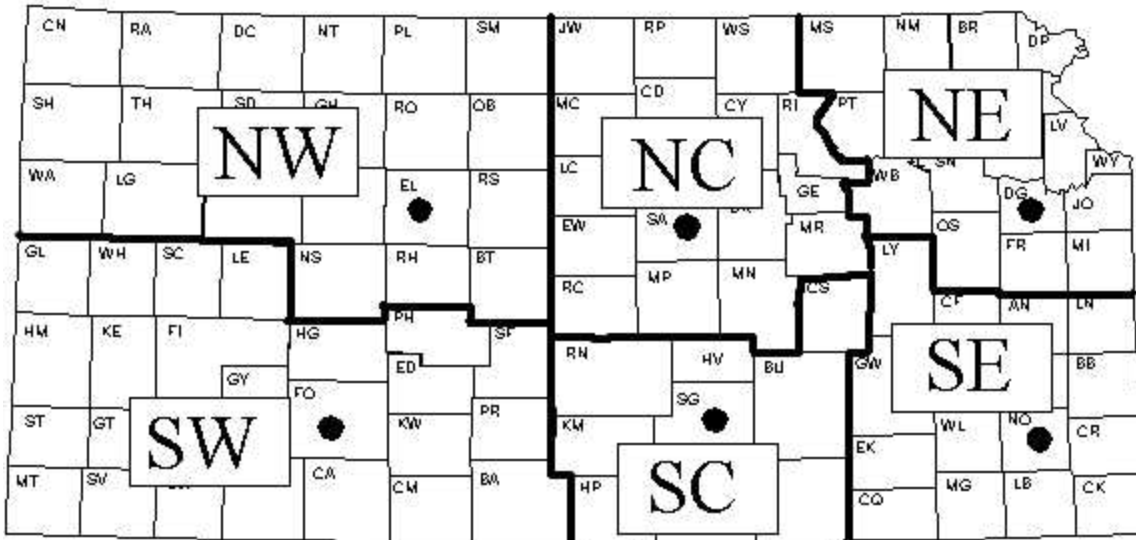
Complaints

(800) 283-8745

Emergency

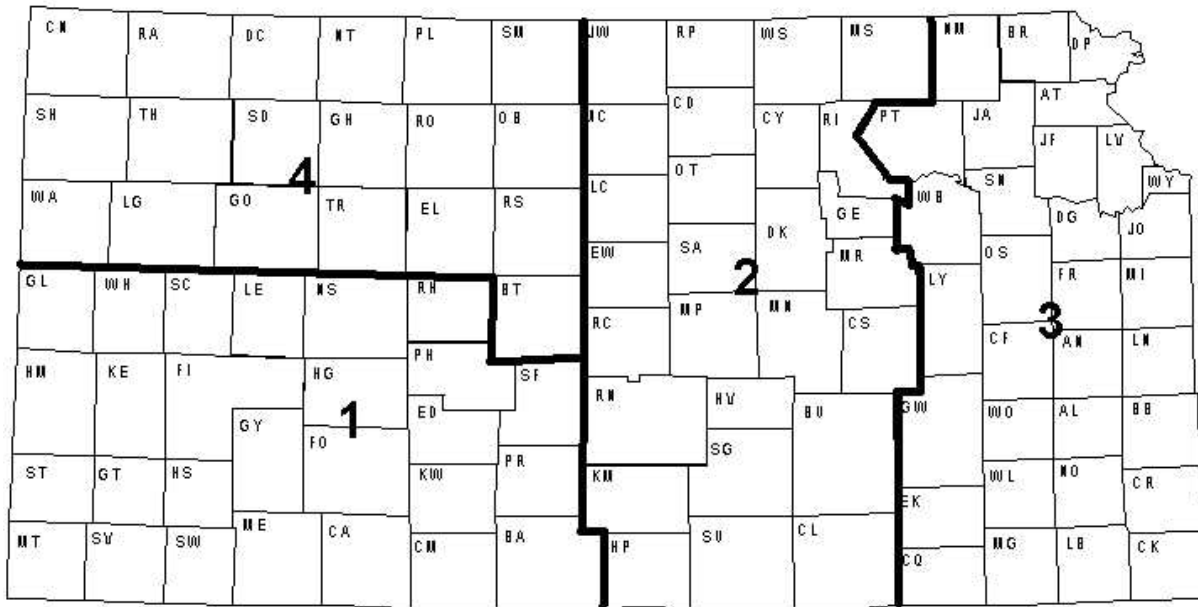
(800) 321-OSHA

KDHE DISTRICT OFFICES – ENVIRONMENT



DISTRICT	PHONE and FAX	ADDRESS
1 <u>SOUTHWEST DISTRICT OFFICE</u> ERICH GLAVE, Administrator WADE KLEVEN, Env. Scientist KENNETH DIEDIKER, Geo Assoc.	SWDO <u>(620) 225-0596</u> FAX (620) 225-3731	302 W. McArtor Rd., Dodge City 67801
2 <u>SOUTH CENTRAL DISTRICT OFFICE</u> ALLISON HERRING, Administrator KYLE PARKER, Prof. Geologist MEER HUSAIN, Prof. Geologist STANLEY MARCOTTE, Env. Scientist	SCDO <u>(316) 337-6020</u> FAX (316) 337-6023	300 W. Douglas, Suite 700, Wichita KS 67202
3 <u>SOUTHEAST DISTRICT OFFICE</u> VICTORIA O'BRIEN, Administrator RENEE BROWN, Env. Scientist	SEDO <u>(620) 431-2390</u> FAX (620) 431-1211	1500 W. 7th, Chanute, KS 66720
4 <u>NORTHEAST DISTRICT OFFICE</u> JULIE COLEMAN, Administrator TOM WINN, Prof. Geologist NATHAN LUNA, Env. Scientist MEREDITH ROTH, Env. Scientist	NEDO <u>(785) 842-4600</u> FAX (785) 842-3537	800 W. 24th Street, Lawrence, KS 66046
5 <u>NORTH CENTRAL DISTRICT OFFICE</u> JENNIFER NICHOLS, Administrator SCOTT LANG, Prof. Geologist HOWARD DEBAUCHE, Prof. Geologist	NCDO <u>(785) 827-9639</u> FAX (785) 827-1544	501 Market Place, Suite D & E, Salina, KS 67401
6 <u>NORTHWEST DISTRICT OFFICE</u> DAN WELLS, Administrator BILL HEIMANN, Prof. Geologist DARRELL SHIPPY, Env. Scientist	NWDO <u>(785) 625-5663</u> FAX (785) 625-4005	2301 East 13th, Hays, KS 67601
<u>SURFACE MINING SECTION</u> MURRAY BALK, Hydrologist	SMS <u>620) 231-8540</u> FAX (620) 231-0753	4033 Parkview Drive, Frontenac, KS 66763

KANSAS CORPORATION COMMISSION DISTRICT OFFICES



- | | | |
|----------------------------|---|--------------------|
| District # 1 | (620) 225-8888
304 W. McArtor
Dodge City, KS 67801 | Fax (620) 225-8885 |
| District # 2 | (316) 630-4000
3450 N. Rock Rd, Bldg 600, Ste 601
Wichita, KS 67226 | Fax (316) 630-4005 |
| District # 3 | (620) 432-2300
1500 W. 7 th
Chanute, KS 66720 | Fax (620) 432-2309 |
| District # 4 | (785) 625-0550
2301 E. 13 th Street
Hays, KS 67601 | Fax (785) 625-0564 |
| Conservation Office | (316) 337-6200
130 S. Market, Rm 2078
Wichita, KS 67202 | Fax (316) 337-6211 |

K. A. R. 28-48. – SPILL REPORTING

28-48-1. **Definitions.** The following words and phrases when used in these regulations have the meanings respectively ascribed to them in this section.

(a) "Owner" means individual, partnership, firm, trust, company, association, corporation, institution, political subdivision or agency which is financially responsible for the material or facility.

(b) "Person responsible" means person or organization which has been placed in control of the material or facility by the owner.

(c) "Waters of the state" means all streams and springs, and all bodies of surface or groundwater, whether natural or artificial, within the boundaries of the State. (Authorized by and implementing K.S.A. 1984 Supp. 65-171d; effective May 1, 1986.)

28-48-2. **Action required.** All sewage, substances, materials, or wastes, as set forth in 65-171d, regardless of phase or physical state, which are, or threaten to contaminate or alter any of the properties of the waters of the state or pollute the soil in a detrimental, harmful, or injurious manner or create a nuisance, shall be reported in the following manner:

(a) The owner or person responsible for the discharge or escape of materials detrimental to the quality of waters of the state or pollution of the soil under conditions other than provided by a valid permit issued by the secretary of health and environment, shall report the discharge or escape to the Kansas department of health and environment.

(b) Emergency or accidental discharge of materials which are detrimental to the quality of waters of the state or tend to cause pollution of the soil shall be immediately reported to the Kansas department of health and environment by the owner, owner's representatives, or person responsible. In the event the pollution causing material is in transit or in storage within the state, the owner, carrier, or person responsible for storage shall be responsible for immediate notification to the Kansas department of health and environment that the pollutant will gain admittance to the waters of the state or the soil. (Authorized by and implementing K.S.A. 1984 Supp. 65-171d; effective May 1, 1986.)

K. S. A. 65-171v – CLEANUP OPERATIONS

Chapter 65. --PUBLIC HEALTH

Article 1. --SECRETARY OF HEALTH AND ENVIRONMENT, ACTIVITIES

65-171v. Cleanup operations for water or soil pollutants; duties of secretary; recovery of costs by attorney general and disposition thereof. Whenever a water or soil pollutant is discharged intentionally, accidentally or inadvertently and the secretary of health and environment or his or her authorized representative determines that the discharged material must be collected, retained or rendered innocuous, and if a discharger refuses to undertake cleanup operations or if the responsible discharger is unknown at the time, the secretary or his or her authorized representative may enter into an agreement with a person to conduct the necessary cleanup operations with payment for such cleanup work to be provided from the pollutant discharge cleanup fund. Any person responsible for or causing the discharge of materials which are determined necessary to cleanup under the provisions of this act shall be responsible for repayment of the costs of cleanup work upon reasonably detailed notification by the secretary or his or her authorized representative. If the responsible person fails to promptly submit payment for costs of the cleanup operations when so notified, such payment shall be recoverable in an action brought by the attorney general on behalf of the people of the state of Kansas in the district court of the county in which such costs were incurred. Any moneys recovered under this section shall be remitted to the state treasurer. Upon receipt thereof, the state treasurer shall deposit the entire amount thereof in the state treasury to the credit of the pollutant discharge cleanup fund.

History: L. 1979, ch. 269, § 2; July 1.

DISCLAIMER

The above regulations represent an electronic facsimile of Kansas Administrative Regulations, promulgated by the Kansas Department of Health and Environment and published by the Kansas Secretary of State. These rules are taken from electronic copies of the printed state regulations that serve as the agency's official rules and regulations. The excerpt portion of KSA 65-171D has been included in this document for informational purposes. This statute provides the basis for the regulations. The printed regulations represent the final word in matters of interpretation.

The KDHE Office of Public Information has appended copies of the *Kansas State Register* publication of new or amended, permanent KDHE regulations to the appropriate chapter. Those amendments are noted on the cover sheet for each chapter. In the interest of saving space, some chapters have been grouped together. Nothing contained herein should be construed as legal advice by KDHE. If you are not an attorney, you should secure competent counsel to interpret the regulations and advise you.

While every effort has been made to assure the accuracy, these electronic copies do not represent the official regulations of the state. The official regulations are the bound copies printed by the Secretary of State

Spill Report Form

For spills of reportable quantities that impact soil, surface water or ground water call KDHE 24-Hour Spill Report Hotline at 785-296-1679.

Date of Report:		Date of Incident:	
Site:		Permit Number:	
Primary Contractor:			

Complete for any type of petroleum product or hazardous materials / waste spill or incident. If the spill is of reportable quantity, written documentation will likely need to be submitted.

Keep a copy of this report with the SWPPP Log.

Person Reporting Spill or Incident	
Name	Address
Organization	
Title	
Telephone	
Email	Signature

Type of Spill:
Common Name of Spilled Substance
Estimated Quantity Spilled
Estimated Concentration
Date and Duration of Spill
Date Clean Up Completed

SPILL TO LAND	SPILL TO WATER BODY
Name of site:	Name of water body:
Street address:	Location of discharge
City	Description of area from which spilled material may reach:
County:	

Actions Taken:

To contain spill:

To clean up spill:

To remove/dispose of spilled substance and cleanup material:

To prevent reoccurrence:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Person responsible for managing spill response:

Name	Signature
Phone	Email

Spill Report Form

For spills of reportable quantities that impact soil, surface water or ground water call KDHE 24-Hour Spill Report Hotline at 785-296-1679.

Date of Report:		Date of Incident:	
Site:		Permit Number:	
Primary Contractor:			

Complete for any type of petroleum product or hazardous materials / waste spill or incident. If the spill is of reportable quantity, written documentation will likely need to be submitted.

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Person responsible for managing spill response:

Name	Signature
Phone	Email

SECTION 11

Endangered Species Documentation

A. ENVIRONMENTAL RESOURCES Indicate potential for adverse impacts. Use a separate sheet to clarify responses per instructions for Part A on page 9.	Not Applicable - Resource does not exist	No/Negligible Impacts - Exists but no or negligible impacts	Minor Impacts	Impacts Exceed Minor EA/EIS required	More Data Needed to Determine Degree of Impact EA/EIS required
1. Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.		X			
2. Air quality		X			
3. Sound (noise impacts)		X			
4. Water quality/quantity		X			
5. Stream flow characteristics	X				
6. Marine/estuarine	X				
7. Floodplains/wetlands	X				
8. Land use/ownership patterns; property values; community livability		X			
9. Circulation, transportation		X			
10. Plant/animal/fish species of special concern and habitat; state/federal listed or proposed for listing	X				
11. Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.	X				
12. Unique or important wildlife/ wildlife habitat	X				
13. Unique or important fish/habitat	X				
14. Introduce or promote invasive species (plant or animal)	X				
15. Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc. <i>Most conversions exceed minor impacts. See Step 3.B</i>		X			
16. Accessibility for populations with disabilities		X			
17. Overall aesthetics, special characteristics/ features		X			
18. Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. Attach SHPO/THPO determination.	X				
19. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure		X			
20. Minority and low-income populations		X			
21. Energy resources (geothermal, fossil fuels, etc.)	X				
22. Other agency or tribal land use plans or policies	X				
23. Land/structures with history of contamination/hazardous materials even if remediated	X				
24. Other important environmental resources to address.	X				

B. Mandatory Criterial <i>If your LWCF proposal is approved, would it...</i>	Yes	No	To Be Determined
1. Have significant impacts on public health or safety?		X	
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands, wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (E.O. 11990); floodplains (E.O. 11988); and other ecologically significant or critical areas.		X	
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]?		X	
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		X	
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		X	
6. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?		X	
7. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office. (Attach SHPO/THPO Comments)		X	
8. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.		X	
9. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment?		X	
10. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?		X	
11. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?		X	
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area, or actions that may promote the introduction, growth, or expansion of the range of		X	

Environmental Reviewers	
<p>The following individual(s) provided input in the completion of the environmental screening form. List all reviewers including name, title, agency, field of expertise. Keep all environmental review records and data on this proposal in state compliance file for any future program review and/or audit. The ESF may be completed as part of a LWCF pre-award site inspection if conducted in time to contribute to the environmental review process for the proposal.</p>	
<p>1. Todd Trotter, Associate Biologist, George Butler Associates, Inc., 17-years environmental permitting and compliance</p> <p>2.</p> <p>3.</p> <p>The following individuals conducted a site inspection to verify field conditions. <i>List name of inspector(s), title, agency, and date(s) of inspection.</i></p> <p>1.</p> <p>2.</p> <p>3.</p> <p>Signature of LWCF sub-recipient applicant here: _____ Date: _____</p>	

**Land and Water Conservation Fund
Grant Application - Supplemental Documentation
for Part A. Environmental Resources**

**City of Mission, Kansas
Mohawk Park**

- 1. Geological resources: soils, bedrock, slopes, streambeds, landforms, etc.**
The proposed park improvements should have no impacts to geological resources. According to the USGS topographic map (**Figure 2**), there is no unique karst topography, losing streams, or landforms known to occur in the project area. As shown in **Figure 5**, the soil type mapped on the property is Sharpsburg-Urban land complex, 4-8% slopes (7545). Although this soil type has a classification of farmland statewide importance, the project area is located in the Kansas City, MO-KS urbanized area (43912) per the 2010 U.S. Census Bureau Urban Area Reference Map; therefore, the project is not subject to the Farmland Protection Policy Act.
- 2. Air quality**
The proposed park improvements should have no to negligible impacts to air quality. The project is not situated within an EPA designated non-attainment area per National Ambient Air Quality Standards (NAAQS). Air quality may be temporarily affected by fugitive dust generated during construction grading activities. As part of the construction stormwater pollution prevention plan, fugitive dust can be effectively minimized using water and other types of soil stabilizers.
- 3. Sound (noise impacts)**
The proposed park improvements should have no to negligible noise impacts. Noise may be temporarily affected during project construction.
- 4. Water quality/quantity**
The proposed park improvements should have no to negligible impacts to water quality / quantity. As part of the construction stormwater pollution prevention plan, temporary erosion and sediment controls will help minimize water quality impacts downgradient of the project during construction.
- 5. Stream flow characteristics**
As shown in **Figure 2** (USGS topographic map) and **Figure 4** (National Wetlands Inventory map), stream resources do not exist on the park property.
- 6. Marine/estuarine**
The park property is situated in the interior of North America where marine or estuarine resources do not exist.
- 7. Floodplains/wetlands**
As shown in **Figure 4** (National Wetlands Inventory map) and **Figure 6** (FEMA Flood map), designated floodplain zones and wetlands do not exist on the park property.
- 8. Land use/ownership patterns; property values; community livability**
The proposed park improvements should have no to negligible impacts to land use / ownership patterns, property values, or community livability. The improvements are anticipated to improve community usage of park open space and amenities.

9. Circulation, transportation

The proposed park improvements should have no to negligible impacts to traffic circulation and volumes, and to area transportation systems. Impacts will be temporary and may be limited to minor traffic disruptions during construction.

10. Plant/animal/fish species of special concern and habitat; state/federal listed or proposes for listing

According to the U.S. Fish & Wildlife Service, federal-listed species in the project area include the Northern Long-eared Bat (threatened), Pallid Sturgeon (endangered), and Mead's Milkweed (threatened). A review of species profiles indicates that the park property does not have the suitable habitat (e.g., Kansas River, bat maternity roosting trees, and undisturbed native warm-season prairie or hay meadows) that would support any of these federal-listed species.

According to the Kansas Department of Wildlife, Parks and Tourism, there are several state-listed fish and bird species with designated habitat in Johnson County, Kansas. A review of species profiles indicates that the park property does not have the suitable habitat (e.g., Kansas River and its floodplain corridor) that would support any state-listed threatened & endangered species.

11. Unique ecosystems, such as biosphere reserves, World Heritage sites, old growth forests, etc.

None of these resources are known to be present on the park property.

12. Unique or important wildlife / wildlife habitat

None of these resources are known to be present on the park property.

13. Unique or important fish / habitat

None of these resources are known to be present on the park property.

14. Introduce or promote invasive species (plant or animal)

The proposed park improvements should not introduce or promote any invasive plant or animal species to the project area. The proposed improvements will include non-invasive perennial and tree plantings.

15. Recreation resources, land, parks, open space, conservation areas, rec. trails, facilities, services, opportunities, public access, etc. *Most conversions exceed minor impacts. See Step 3.B*

The proposed improvements do not involve converting any existing park features or amenities for non-recreational purposes. The proposed improvements at Mohawk Park should have a beneficial long-term affect by expanding recreational public access, use and opportunities.

16. Accessibility for populations with disabilities

The proposed park improvements should have no accessibility impacts to populations with disabilities. The proposed improvements at Mohawk Park should have a beneficial long-term affect by expanding recreational accessibility for populations with disabilities.

17. Overall aesthetics, special characteristics/ features

The proposed park improvements should have no impacts to the overall aesthetics and characteristics of the surrounding residential neighborhood.

18. Historical/cultural resources, including landscapes, ethnographic, archeological, structures, etc. Attach SHPO/THPO determination.

As shown in the provided exhibits, the property was utilized as a public school between the early-1960's to mid-2000's when the school building and all support structures were demolished. There are no known historical / cultural resources on the park property and the park improvements do not involve the demolition or rehabilitation of any existing structures. As shown in **Figure 7** (National Register of Historic Places), the nearest registered historic property is the Broadmoor Ranch House School District located approximately 0.50-mile southwest of the park property. The project is not anticipated to directly affect or restrict access to this known resource.

19. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure

The proposed park improvements should have no to negligible socioeconomic impacts. The improvements do not require commercial or residential displacements and no new right of way or easements. Road closures and detours are not anticipated for this project. Impacts will be temporary and may be limited to minor traffic disruptions, construction noise, and fugitive dust during construction.

20. Minority and low-income populations

The proposed park improvements should have no impacts to minority and low-income populations.

21. Energy resources (geothermal, fossil fuels, etc.)

As shown in the provided exhibits, there are no major energy sources known to present on the park property. The nearest registered water well used for geothermal purposes is located approximately 900-feet north and the nearest active natural gas well is approximately 2-miles west of the park property. A registered natural gas pipeline is situated along W. 67th Street right of way. The proposed park improvements should have no impacts to these energy resources.

22. Other agency or tribal land use plans or policies

There are no other agency or tribal land use plans or policies known to be associated with the park property.

23. Land/structures with history of contamination/hazardous materials even if remediated

As shown in the provided exhibits, according to the Kansas Department of Health & Environment (KDHE) on-line Environmental Interest Finder there are no lands or structures with a history of contamination / hazardous materials known to be present on or near the park property.

24. Other important environmental resources to address.

There are no other important environmental resources known that are needing to be addressed on the park property.

FIGURES

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

Mohawk Park

LOCATION

Johnson County, Kansas



DESCRIPTION

Construction of a restroom pavilion.

Local office

Kansas Ecological Services Field Office

☎ (785) 539-3474

📠 (785) 539-8567

2609 Anderson Avenue
Manhattan, KS 66502-2801

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Northern Long-eared Bat *Myotis septentrionalis*
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/9045>

Threatened

Fishes

NAME	STATUS
Pallid Sturgeon <i>Scaphirhynchus albus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7162	Endangered

Flowering Plants

NAME	STATUS
Mead's Milkweed <i>Asclepias meadii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8204	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>

- Nationwide conservation measures for birds
<http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

MIGRATORY BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some

deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

SECTION 12

Historic Preservation Documentation

Section 106 Reviews are required when projects are located on federal land, federally funded or are federally permitted (i.e. 404 permit). The State of Kansas also requires a review for any activities involving the issuing of a lease, permit, license or certificate by a government unit.

KSR&C # 21-11-152
December 21, 2021

Rachael Reis
Olsson Associates.
Via email

Re: Residential Street Reconstruction
62nd Street, Outlook Street, and Reeds Road, Mission
Johnson County

The Kansas State Historic Preservation Office has reviewed the materials received November 30, 2021, in accordance with KDHE's requirement for a Notice of Intent. According to our records there are no historic properties or areas of concern within the project area. Our office has no objection to the implementation of the project. If, however, any federal funds are to be used or if any federal permits might ultimately be required, the applicant will be required to comply with 36 CFR 800.

Please refer to the Kansas State Review & Compliance number (KSR&C#) listed above on any future correspondence. If you have any questions concerning this review, please contact Tim Weston at 785-272-8681 ext. 214 or Tim.Weston@ks.gov.

Sincerely,

Jennie Chinn
State Historic Preservation Officer



Patrick Zollner
Director, Cultural Resources Division
Deputy State Historic Preservation Officer

SECTION 13

Inspection Reports

- Inspection Reports
- Inspector Credentials

Stormwater Construction Site Inspection Report

General Information			
Project Name		Date of Inspection	
Permit Number		Time of Inspection	
Inspector's Name(s)		Inspector's Title	
Inspector's Contact Information			
Describe present phase of construction			
Type of Inspection:	<input type="checkbox"/> Routine <input type="checkbox"/> Post-Storm Event <input type="checkbox"/> Post Regulatory Inspection (optional)		
Weather Information			
Has there been a storm event since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, provide: Storm Start Date: _____ Approximate Amount of Precipitation (in): _____			
Weather at time of this inspection?			
<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds <input type="checkbox"/> Other: _____ Approximate Temperature: _____			

Stormwater Discharge Locations
Were any discharges noted at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No
If yes, describe:
Did upstream BMPs appear to be operating effectively during inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No
If no, list any non-effective BMPs in the corrective action log on the next page.

Areas Where Land Disturbance Operations Have Permanently or Temporarily Stopped

INSPECTOR CERTIFICATION

I verify that, to the best of my knowledge and belief, all corrective action items identified during the inspection are complete and accurate.

Inspector Signature: _____ **Date:** _____

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Print Name and Title: _____

Signature: _____ **Date:** _____

SECTION 14

Regulatory Correspondence

Pertinent correspondence from regulatory agencies relating to this project can be located here.

SECTION 15

Notice of Termination

When the soil disturbing activities are complete and final stabilization of all disturbed areas has been achieved, the permittee can terminate coverage under this NPDES general permit by submitting the NOT. The project is considered to be stabilized when perennial vegetation, pavement, buildings, or structures using man-made materials cover all areas which have been disturbed. Vegetation must have a density of at least 70 percent of the density of undisturbed areas at or near the site (KDHE 2017).



NOTICE OF TERMINATION

To Relinquish the Authorization to Discharge Stormwater Runoff from Construction Activities at the Construction Site Described Herein

Submission of this Notice of Termination (NOT) constitutes notice that the party identified below relinquishes authorization for coverage under the Kansas Stormwater Runoff from Construction Activities general permit, or KDHE authorized successor permits, issued for discharge of stormwater runoff for the construction activity at the site named herein. Completion of this NOT does not automatically relieve the former permittee of any civil, criminal and/or administrative penalties.

To be considered complete, the NOT must be signed by the current permittee or a duly authorized representative of the current permittee, and must include the permit number assigned to the construction activity. KDHE will notify any permittee whose NOT is incomplete or deficient.

Please Print or Type:

Name of Project: _____

City: _____ County: _____ State: KS

Kansas Permit No. _____ Federal Permit No. _____

Company Name: _____ Phone: _____

This Notice of Termination is being submitted because: (check one)

- checkbox The construction project or larger common plan of development is finished and final site stabilization has been completed (pavement, buildings, structures, or perennial vegetation having a density of at least 70% of undisturbed areas at the site cover all areas which have been disturbed - See Part 9 of the NPDES general permit S-MCST-1703-1).
checkbox This project is a house development subdivision project that has had a construction stormwater discharge Authorization for at least 3 years, the vacant lots are all stabilized, and the rate of home construction within the development disturbs less than one (1.0) acre (approximately 5 lots) per year or less than one (1.0) acre of land (approximately 5 lots) remain available for development (see Part 9 of the NPDES general permit S-MCST-1703-1).
checkbox The construction project or larger common plan of development is not finished; however, duplicate authorization for permit coverage* under NPDES general permit S-MCST-1703-1 or KDHE authorized successor permits has been issued and is in effect for all remaining construction activities and all areas disturbed by previous construction activities that have not obtained final stabilization.

* The duplicate Kansas Permit Number is: _____

- checkbox The project was cancelled prior to initiating construction activities. The project construction will not be actively pursued under the current authorization for coverage. It is understood that should the project be revived in the future, a new complete application packet with first year annual permit fee will need to be submitted.

I certify under penalty of law that all soil disturbances associated with the construction activity at the construction site named herein meet one of the four criteria indicated above in accordance with Part 9 of the NPDES general permit S-MCST-1703-1. I understand that by submitting this Notice of Termination, I am no longer authorized under the NPDES general permit S-MCST-1703-1 to discharge stormwater associated with construction activity at this construction site. I understand that discharging pollutants in stormwater associated with construction activity to waters of the State is unlawful under K.S.A. 65-164 and 65-165 and the Clean Water Act without authorization by a valid Kansas Water Pollution Control Permit. I understand that by submitting this Notice of Termination, I am not released from liability for any violations of the NPDES general permit S-MCST-1703-1, K.S.A. 65-164 and 65-165, the Kansas Surface Water Quality Standards (K.A.R. 28-16-28 et seq.), or the Clean Water Act. I also hereby certify that I am authorized to sign this Notice of Termination as a representative of the permittee named herein.

Signature: _____ Date: _____

Name and Official Title: _____
(Please print or type)

Submit the NOT with original signature to:

Kansas Department of Health and Environment
Bureau of Water, Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, KS 66612 - 1367



PO Box 680121
 Fort Payne, AL 3568
 150 Playcore Drive SE
 Fort Payne, AL 35967

05/30/2023
 Quote #
 164948-01-02

Mohawk Park Playground - Rev 1

Mission Parks and Recreation
 Attn: Penn Almoney
 67th & Lamar
 Mission, KS 66202
 Phone: 913-722-8210
 Fax: 913-722-8208
 palmoney@missionks.org

Ship to Zip 66202

Quantity	Part #	Description	Unit Price	Amount
1	RDU	GameTime - 5-12 Yr Old Powerscape Structure	\$369,908.00	\$369,908.00
1	RDU	GameTime - 2-5 Yr Old PrimeTime Structure	\$63,580.00	\$63,580.00
1	INSTALL	MISC - Installation of Above Structures	\$128,615.00	\$128,615.00
1	81754	GameTime - Music Time	\$2,228.00	\$2,228.00
1	4677	GameTime - Melody Chimes	\$7,567.00	\$7,567.00
1	4680	GameTime - Jazz Combo	\$8,221.00	\$8,221.00
1	3259	GameTime - Concert Trio	\$5,743.00	\$5,743.00
1	6258	GameTime - Sensory Cove Climber - Triangle	\$3,202.00	\$3,202.00
1	6300	GameTime - Stargazer	\$2,499.00	\$2,499.00
1	0431LD	GameTime - F/S Custom Communication Board - 45 Symbols on Each Side	\$7,040.00	\$7,040.00
1	INSTALL	MISC - Installation of Above Freestanding Items	\$10,365.00	\$10,365.00
1	5979SP	GameTime - VistaTwist Tower 1	\$72,533.00	\$72,533.00
1	INSTALL	MISC - Installation of Net	\$22,390.00	\$22,390.00
1	RDU	GameTime - PrimeTime Swings	\$6,248.00	\$6,248.00
1	5208	GameTime - Saucer Swing (Galv)	\$7,060.00	\$7,060.00
1	INSTALL	MISC - Installation of Swings	\$3,700.00	\$3,700.00
6	28009	GT-Site - 6' P/S Bench W/Back Inground	\$978.00	\$5,868.00
6	INSTALL	MISC - Installation of Benches	\$310.00	\$1,860.00
3	QRI434	GT-Shade - HYU121208IG HYPERBOLIC UMB 12X12X8	\$4,618.00	\$13,854.00
3	INSTALL	MISC - Installation of Single Post Shades	\$2,040.00	\$6,120.00
1	QRM459	GT-Shade - IS25253512 ISOSCELES SAIL 25X25X35X12	\$11,410.00	\$11,410.00
1	INSTALL	MISC - Installation of Shade over 2-5 Structure	\$4,015.00	\$4,015.00
8620	PIP	GT-Impax - Per SF Poured in Place Rubber Surfacing- <ul style="list-style-type: none"> • Price includes materials, shipping, installation at standard wages, and trash removal. • 2935 SF @ 5.25" Thick for 12' CFH • 5685 SF @ 3.75" Thick for 8' CFH • 50/50 Black/Standard Color: _____ • Aromatic binder included. Selected colors may amber. • Includes simple graphics. • Includes 4-Square & Hopscotch graphics • 5 year standard warranty • Site security by others. 	\$23.21	\$200,070.20
8620	INSTALL	MISC - Supply/Install 4" Stone Base for PIP	\$4.63	\$39,910.60
1	INSTALL	MISC - Drainage	\$2,160.00	\$2,160.00



PO Box 680121
Fort Payne, AL 3568

150 Playcore Drive SE
Fort Payne, AL 35967

05/30/2023
Quote #
164948-01-02

Mohawk Park Playground - Rev 1

Quantity	Part #	Description	Unit Price	Amount
1	INSTALL	MISC - Ancillary Services - Final grade work, Seed/Straw Disturbed Areas	\$1,485.00	\$1,485.00
1	178749	GameTime - Owner's Kit	\$84.00	\$84.00
1	14928	GameTime - NDS Inclusive Play Sign Package		
1	14927	GameTime - NDS Play On Sign Package		
Contract: OMNIA #2017001134			Sub Total	\$1,007,735.80
			Discount	(\$157,365.47)
			Freight	\$15,733.26
			Total	\$866,103.59

Comments

- Site must be clear, level, free of obstructions and accessible.
- All site prep, excavation and grading by others. (other than fine grading for equipment footings and drainage to daylight)
- Perimeter sidewalk by others.
- Taxes not included.
- EXTENDED LEAD TIME: Please be advised this quote contains products which may require extended lead times of up to 18 weeks or more based on date of order.

GAMETIME - TERMS & CONDITIONS:

- **PRICING: Due to volatile economic demand, pricing is valid for 30 days. Pricing is subject to change. Request updated pricing when purchasing from quotes more than 30 days old.**
- **TERMS OF SALE:** For equipment & material purchases, Net 30 days from date of invoice for governmental agencies and those with approved credit. All others, full payment for equipment, taxes and freight up front. Balance for services & materials due upon completion or as otherwise negotiated upon credit application review. Pre-payment may be required for equipment orders totaling less than \$5,000. Payment by VISA, MasterCard, or AMEX is accepted (**If you elect to pay by credit card, GameTime charges a 2.50% processing fee that is assessed on the amount of your payment. This fee is shown as a separate line item and included in the total amount charged to your credit card. You have the option to pay by check, ACH or Wire without any additional fees.**). Checks should be made payable to Playcore Wisconsin, Inc. d/b/a GameTime unless otherwise directed.
- **CREDIT APPLICATION:** Required for all non-governmental agencies and those entities who have not purchased from GameTime within the previous twelve calendar months.
- **FINANCE CHARGE:** A 1.5% monthly finance charge (or maximum permitted by law) will be added to all invoices over 30 days past due.
- **CASH WITH ORDER DISCOUNT:** Orders for GameTime equipment paid in full at time of order via check or electronic funds transfer (EFT) are eligible for a 3% cash-with-order (CWO) discount.
- **ORDERS:** All orders shall be in writing by purchase order, signed quotation or similar documentation. Purchase orders must be made out to Playcore Wisconsin, Inc. d/b/a GameTime.
- **FREIGHT CHARGES:** Shipments shall be F.O.B. destination. Freight charges prepaid and added separately.
- **SHIPMENT: Standard Lead time is 12-14 weeks** (some items may take longer) after receipt and acceptance of purchase order, credit application, color selections and approved drawings or submittals.
- **PACKAGING:** All goods shall be packaged in accordance with acceptable commercial practices and marked to preclude confusion during unloading and handling.
- **RECEIPT OF GOODS:** Customer shall coordinate, receive, unload, inspect and provide written acceptance of shipment. Any damage to packaging or equipment must be noted when signing delivery ticket. If damages are noted, receiver must submit a claim to Cunningham Recreation within 15 Days. Receiver is also responsible for taking inventory of the shipment and reporting any concealed damage or discrepancy in quantities received within 60 days of receipt.
- **RETURNS:** Returns are only available on shipments delivered within the last 60 days. A 25% (min.) restocking fee will be deducted from any credit due. Customer is responsible for all packaging & shipping charges. Credit is based on condition of items upon return. All returns must be in unused and merchantable condition. GameTime reserves the right to deduct costs associated with restoring returned goods to merchantable condition. Uprights & custom products cannot be returned.
- **TAXES:** Sales tax is shown as a separate line item when included. A copy of your tax exemption certificate must be submitted at time of order or taxes will be added to your invoice.



PO Box 680121
Fort Payne, AL 3568

150 Playcore Drive SE
Fort Payne, AL 35967

05/30/2023
Quote #
164948-01-02

Mohawk Park Playground - Rev 1

INSTALLATION CONDITIONS:

- **ACCESS:** Site should be clear, level and allow for unrestricted access of trucks and machinery.
- **STORAGE:** Customer is responsible for providing a secure location to off-load and store the equipment during the installation process. Once equipment has delivered to the site, the owner is responsible should theft or vandalism occur unless other arrangements are made and noted on the quotation.
- **FOOTER EXCAVATION:** Installation pricing is based on footer excavation through earth/soil only. Customer shall be responsible for unknown conditions such as buried utilities (public & private), tree stumps, rock, or any concealed materials or conditions that may result in additional labor or materials cost.
- **UTILITIES:** Installer will contact 811 to locate all public utilities prior to layout and excavation of any footer holes. Owner is responsible for locating any private utilities.
- **ADDITIONAL COSTS:** Pricing is based on a single mobilization for installation unless otherwise noted. Price includes ONLY what is stated in this quotation. If additional site work or specialized equipment is required, pricing is subject to change.

ACCEPTANCE OF QUOTATION:

Acceptance of this proposal indicates your agreement to the terms and conditions stated herein.

Accepted By (printed): _____ Title: _____

Telephone: _____ Fax: _____

P.O. Number: _____ Date: _____

Purchase Amount: **\$866,103.59**

SALES TAX EXEMPTION CERTIFICATE #: _____

(PLEASE PROVIDE A COPY OF CERTIFICATE)

Salesperson's Signature

Customer Signature



PO Box 680121
Fort Payne, AL 3568

150 Playcore Drive SE
Fort Payne, AL 35967

05/30/2023
Quote #
164948-01-02

Mohawk Park Playground - Rev 1

BILLING INFORMATION:

Bill to: _____

Contact: _____

Address: _____

Address: _____

City, State: _____ Zip: _____

Tel: _____ Fax: _____

E-mail: _____

SHIPPING INFORMATION:

Ship to: _____

Contact: _____

Address: _____

Address: _____

City, State: _____ Zip: _____

Tel: _____ Fax: _____

E-mail: _____

SECTION 321313 - CAST-IN-PLACE CONCRETE

PART 1- GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including Bidding Requirements, General and Supplementary Conditions and Division I Specification Sections, apply to work specified in this Section.
- B. Comply with ACI 301-8 and 318-83 for all work.

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate installation with work of other trades.

1.03 WORK INCLUDED

- A. Provide all labor, materials, equipment and supervision required to construct concrete steps, walls, and bollards, etc., including:
 - 1. Concrete.
 - 2. Curing Compounds.
 - 3. Expansion and contraction joints and fillers.
 - 4. Sleeves.

1.04 QUALITY ASSURANCE

- A. Owner to provide all testing of on-site concrete. Lab reports shall be simultaneously forwarded to the Owner, Contractor, Architect and Landscape Architect.
- B. Testing:
 - 1. Slump to be checked in accordance with ASTM C143. One test minimum per day.
 - 2. Air content measured in accordance with ASTM C231, or C173. One test minimum daily.
 - 3. Strength tests:
 - a. Take one (1) cylinder for each fifty (50) cubic yards or part thereof. Minimum one set of One (1) cylinder per each day's pour.
 - b. Each cylinder shall be plainly marked showing cylinder designation (1A, 1B, 1C, etc.).
 - c. Job cure each cylinder three (3) days.
 - d. After three (3) days, Owner will test at ages seven (7) days and set of two at twenty-eight (28) days. Additional Cylinders to remain at the job as a "spare" cured under same conditions as concrete in the area from which it was taken.
 - e. The date and location of each sample shall be marked on the Contractor's job set of plans.
 - f. Load and core tests shall be required only if cylinder tests indicate concrete does not meet Specifications. Such tests, if deemed advisable by the Landscape Architect, shall be arranged and paid for by the Contractor.

1.05 SUBMITTALS

- A. Certification of concrete design mix by a testing laboratory. Submit prior to placement.
- B. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- C. Joint Sealer color samples for approval
- D. Formwork Shop Drawings: Prepared by or under the supervision of a qualified professional engineer detailing fabrication, assembly, and support of formwork.
 - 1. Shoring and Reshoring: Indicate proposed schedule and sequence of stripping formwork, shoring removal, and installing and removing reshoring.

1.06 CODES, PERMITS AND FEES

- A. Obtain any necessary permits for this Section of Work.

- B. The entire installation shall fully comply with all state laws and ordinances, and with all established codes applicable thereto.

1.07 SITE DISTURBANCES

- A. Take precautions to ensure that equipment and vehicles do not disturb or damage existing site grading, walks, drives, utilities, plants, etc.
- B. Verify locations and depths of all underground utilities prior to excavation.
- C. Protect adjacent work. Repair and/or return to original condition any damage caused by Contractor's negligence at no cost to Owner.
- D. Provide temporary barricades and warning lights as required for protection of project work and public safety.

PART 2 - PRODUCTS

2.01 PORTLAND CEMENT

- A. ASTM C150, type 1 or type 111.

2.02 SAND

- A. Clean, hard, washed and well graded. Sand shall conform with ASTM C33. Provide tests providing compliance with this Section.

2.03 COARSE AGGREGATE

- A. Aggregate shall conform to ASTM C33. Aggregate for footings and other unexposed concrete may be gravel. Aggregate for exterior concrete and surfaces shall be KCMMB aggregate, max. size 1". No substitutions will be allowed. Evidence of staining due to impurities will be cause for rejection of work.
- B. Class: Severe weathering region, but not less than 3S

2.04 MIXING WATER

- A. Clean and free from oil, acid and injurious amounts of vegetable matter, alkalies and other impurities. Complying with ASTM C 94.

2.05 ADMIXTURES

- A. Air-entraining agents shall conform to ASTM C260. Calcium Chloride is not to be used. No other admixtures shall be used without the expressed, written consent of the Landscape Architect. A water reducing agent may be used as deemed necessary, to be in conformance with the latest ASTM requirements. A maximum of 15% replacement of cement with fly ash will be permitted.

2.06 CURE AND SEAL

- A. CS-309 W.R. Meadows, Inc. or equivalent.

PART 3- EXECUTION

3.01 SUBGRADE PREPARATION

- A. Excavate, fill, compact, grade and prepare subgrade as specified in Earthwork and Site Grading: Section 31 2200.

3.02 FORMS

- A. Use wood or steel forms adequately staked and braced for all exposed slab edges. Construct curve forms with flexible material, adequately braced to provide a smooth continuous curved walk or wall surfaces.
- B. Secure forms in place to maintain grade and alignment while concrete is placed and finished.
- C. Set base of form at subgrade elevation or below with top of form at pavement surface elevation at edge of slab; set forms on properly compacted materials.
- D. Oil forms before concrete is placed.

- E. Leave forms in place not less than eight (8) hours after concrete is placed. If removal causes damage to concrete, leave forms on as long as necessary to prevent damage.
- F. Remove forms with care to prevent cracking, spalling or overstressing concrete.

3.03 CONCRETE MIX

- A. Concrete mix for concrete steps and walls:
 - 1. KCM MB 4K - Minimum of 4,000 psi compressive strength at twenty-eight (28) days.
 - 2. Maximum of five (5) gallons of water per sack of cement (including free moisture in aggregate).
 - 3. Minimum of six (6) sacks of cement per cubic yard.
 - 4. Slump four inch (4") maximum.
 - 5. Air content 5% - 7%.

3.4 MIXING

- A. Except as otherwise specified, concrete shall be ready-mixed or job-mixed at the Contractor's option, and in accordance with requirements of ACI 318-77. Ready-mixed concrete shall be mixed and delivered to the project in accordance with ASTM C94. Maximum mixing time is one (1) hour.

3.5 JOINTS

- A. Construction Joint - Keyed joints or doweled joints shall be used at ends of all concrete pours. Bars to extend through joints a minimum of twenty-four (24) bar diameters.
- B. Tooled expansion joints at exterior concrete slabs shall be installed as shown on the plans.
- C. Expansion joints to be placed at all turns horizontally or changes vertically and for every 30'.
- D. Tooled contraction joints shall be and one-half (1/2) inch maximum wide and two (2) inches of slab thickness in depth with one-quarter (1/4) inch radius edge.
- E. Sidewalk construction joints shall be spaced as shown on Plans.

3.6 PLACING AND PROTECTING CONCRETE

- A. No concrete shall be placed until Landscape Architect has inspected and approved forms, placement of reinforcement, pipes, sleeves, conduit and other inserts.
- B. Before placing concrete, remove all debris, water and ice from the place to be occupied by the concrete. Wet subgrade and forms immediately prior to placing concrete.
- C. Concrete shall be deposited in the forms as nearly as possible to final location. The placing or depositing of all concrete shall be done in accordance with requirements of the ACI 318-77. Brush on neat grout where placing against hardened concrete.
- D. Erect windbreaks to prevent strong, hot winds from drying exposed slabs while they are being finished. Keep concrete moist.
- E. Use of salt or other chemicals is prohibited. Use of accelerating admixtures will not be permitted.
- F. Cold weather concreting shall be done only if Contractor can maintain temperatures of seventy (70) degrees F. or above for three (3) days or fifty (50) degrees F. or above for five (5) days. Do not allow concrete to freeze for next four (4) days. Keep concrete moist. Place no concrete for foundations on backfilled earth, disturbed or frozen earth. During cold weather concreting, prevent freezing of soil beneath footing. All compacted fill to receive concrete floors shall be brought to a temperature of fifty (50) degrees before concrete floor is placed and shall be maintained at this temperature until concrete has taken its final set.
- G. Place concrete continuously between construction joints. Deposit in horizontal layers not greater than 24". Consolidate layers while still plastic to prevent cold joints.
- H. Place all footings full thickness in one operation, without changing in proportions; screeded to proper elevation; and floated.
- I. Consolidate installed concrete using mechanical vibrating equipment supplemented with hand rodding and tamping. Work concrete thoroughly around reinforcement and other embedded items and into all parts of formwork.

3.7 FINISHING

- A. Walls

1. Remove bulges, fins, form marks and roughness from exposed surfaces by grinding.
2. Fill honeycombed and other defective area by cutting out to solid concrete (minimum depth = 1") with straight edges and at right angles to the surface. Dampen area to be patched, brush on grout of equivalent parts Portland Cement and sand and follow immediately with patching mortar.
3. Patching mortar to be not richer than one (1) part Portland Cement to three (3) parts sand. Color of patching mortar shall match the adjacent concrete. (Substitute white Portland Cement for part of the grey cement as needed to provide color match).
4. Trowel or burlap rub patched areas to match the surrounding concrete area. Clean all walls upon completion.
5. Exposed concrete wall faces to have a uniform board form concrete finish.
6. Acceptance: The presence of serious honeycomb or excessive misalignment of forms shall be sufficient cause of rejection and replacement of the concrete affected at the Contractor's expense.

3.8 CONCRETE CURING

- A. All concrete shall be kept continuously moist for at least five (5) days after placement. If forms are removed prior to five days, apply liquid membrane-forming curing compound complying with ASTM C309.
- B. Formed concrete shall be cured in the forms with the exposed surfaces covered by burlap or polyethylene. Stripping of wall and non-structural forms prior to the end of the curing period will not be permitted, unless provisions are made to keep the concrete covered and sealed tight.

3.9 APPLICATION OF SEALER (ALL EXPOSED CONCRETE SLABS)

- A. Apply one coat as a cure as soon after final troweling as possible. Coverage and application in accordance with manufacturer's recommendations.

3.10 CLEANING

- A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from concrete operations.

END OF SECTION 321313

APPROVED

(rev 1-8-2021)

6"H Raised Letterforms

8'0" (96")

Broadmoor
PARK



10% actual size