

Drawing name: W:\Proj\180984\180984\18365.002\AutoCad\vdg\submit\18365.002_DP-Layout.dwg Layout name: Location Map and Notes Plotted on: Sep 15, 2014 - 1:58pm



LOCATION MAP
NTS



DESCRIPTION:

WAKARUSA WASTEWATER TREATMENT PLANT ADD LT 1 (PLAT 2014)

PROJECT OWNER/DEVELOPER

CITY OF LAWRENCE
6 E. 6TH STREET
LAWRENCE, KS 66049

GENERAL NOTES

- Zoning: Lot 1 - GPI-FP (General Public and/or Institutional with Floodplain Management Regulations Overlay)
- Refer to Final Plat recorded on March 14, 2014 for all property information for this site and surrounding properties. (See attached)
- Current Use: Agriculture.
Proposed Use: Wastewater treatment facility and Agriculture.
- Boundary and Topographic information taken from field survey prepared by Bartlett & West (Fall 2013).
- Site lighting shown is not final and will not be finalized until all utilities have been routed. All site lighting to be wall mounted lights or access drive pole lights. All lighting fixtures shall be provided with a full cut-off fixture and be directed down. Applicant shall provide lighting fixture details for review and approval prior to issuance of a building permit. Photometric plan to be provided prior to final approval.
- The public portion of the facility has been designed to comply with the provisions of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) for building and facilities. Appendix A to 28 CFR Part 36.
- All mechanical equipment will be screened in accordance with Section 20-1006(b) of the Development Code.
- All traffic control signs placed on private property open to the general public shall comply with the "Manual on Uniform Traffic Control Devices" and "Standard Highway Signs," published by the Federal Highway Administration, with respect to size, shape, color, retroreflectivity, and position.
- Turf areas to be seeded unless noted otherwise.
- Refer to attached sheets for proposed administration building materials and elevations.
- This site is located within the 100 year floodplain. A Floodplain Development Permit application has been submitted to the City of Lawrence and the State of Kansas.
- Storm sewer will be designed and included with the final bid documents. Storm sewer must be designed to coordinate with all utilities on site along with the treatment process.
- Curb and gutter in public parking areas to be Type CG-1. Curb and gutter in plant area to be Type CG-2.
- Entry sign details and height will be submitted prior to building permit approval.
- All fencing to be 7' tall coated steel or aluminum fence fabric, with top bar, 45° barb wire arm (3-strand).
- Each manual chain link gate shall be locked with a Knox Padlock and automatic gates shall be equipped with Fire Department approved optic sensor. Contractor to contact the fire department for an application.
- All property outside of construction limits to remain agriculture use. Any future structures and/or pavement will require site plan approval from the City of Lawrence prior to construction.
- All landscaping outside of construction limits to remain as is and used as landscape buffer.
- The subject property is located within the one percent annual chance (100 year) floodplain according to the Federal Emergency Management Agency, Flood Insurance Rate Map, Map Number 2004CO187D and 2004CO189D, Effective Date: August 5, 2010 and the 2014 FEMA Preliminary Flood Map, Effective Date: May 30, 2014.
- Sidewalks will not be required to be installed along the street right-of-way with this development, but will be installed when the adjacent properties have developed to urban standards.
- Alternative Compliance has been approved from the requirement in 20-1307(2)(i) to provide Type 3 Bufferyard landscaping along the perimeter of the property based on the distance of the facility from the adjacent properties and the natural vegetation that occurs
- All parking along sidewalks at the Administration Building shall be 9' x 16' with 2' of overhang. Sidewalks have been designed to account for the overhang and required clear width.

SITE SUMMARY:

EXISTING SITE SUMMARY

EXISTING BUILDING :	689 SF (0.02 AC.)
EXISTING PAVEMENT:	71,841 SF (1.65 AC.)
TOTAL IMPERVIOUS:	72,530 SF (1.67 AC.)
EXISTING PERVIOUS	23,070,462 SF (529.62 AC.)
TOTAL PROPERTY AREA:	23,142,992 SF (531.29 AC.)

PROPOSED SITE SUMMARY PHASE 1

EXISTING/PROPOSED STRUCTURES:	
NON BUILDINGS	201,862 SF (4.63 AC.)
BUILDINGS	33,120 SF (0.76 AC.)
EXISTING/PROPOSED PAVEMENT:	299,624 SF (6.88 AC.)
PROPOSED IMPERVIOUS:	534,606 SF (12.27 AC.)
EXISTING/PROPOSED PERVIOUS:	22,608,386 SF (519.02 AC.)
TOTAL PROPERTY AREA:	23,142,992 SF (531.29 AC.)

BASE BID REQUIRED PARKING:

MAJOR UTILITIES & SERVICES
1 STALL PER 1.5 EMPLOYEES (25 EMPLOYEES)
= 17 STALLS REQUIRED

FLEET VEHICLES
3 FLEET VEHICLES
= 3 STALLS REQUIRED

PARKING PROVIDED
20 STALLS (1 VAN ACCESSIBLE ADA, 1 CARPOOL AND 1 FUEL EFFICIENT STALLS INCLUDED)

BICYCLE
1 STALL PER 10 PARKING STALLS
= 2 BICYCLE STALLS REQUIRED

ALTERNATE BID REQUIRED PARKING*:

MAJOR UTILITIES & SERVICES
1 STALL PER 1.5 EMPLOYEES (25 EMPLOYEES)
= 17 STALLS REQUIRED

FLEET VEHICLES
3 FLEET VEHICLES
= 3 STALLS REQUIRED

ASSEMBLY - ACCESSORY CONFERENCE ROOM
1 STALL PER 4 SEATS (145 SEATS)
= 37 STALLS REQUIRED

PARKING PROVIDED
57 STALLS (3 VAN ACCESSIBLE ADA, 3 CARPOOL AND 3 FUEL EFFICIENT STALLS INCLUDED)

BICYCLE
1 STALL PER 10 PARKING STALLS
= 6 BICYCLE STALLS

* PARKING SHOWN REPRESENTS THE BID ALTERNATE. IF BASE BID IS CHOSEN, PARKING LOT WILL BECOME SMALLER.

STRUCTURE SCHEDULE

	FINISHED FLOOR ELEVATION	TOP OF STRUCTURES	OVERALL HEIGHT	SQUARE FOOTAGE
ADMINISTRATION	829.00	846.33	17.33	9424
HEADWORKS	841.00/823.50	860.33	36.66	5762
CHEMICAL STORAGE & FEED	828.50	849.17	20.67	3774
FINAL SLUDGE PUMPING STATION	827.00	845.00	18.00	4844
ULTRA-VIOLET DISINFECTION	824.00	843.33	19.33	4050
SOLIDS THICKENING	826.00	847.33	21.33	4393
VEHICLE STORAGE & MAINTENANCE	826.00	845.00	16.00	3018
BNR FLOW (AT GRADE)	831.50			
BNR NO. 1 & NO. 2 (AT GRADE)	829.50			
FC NO.1 & NO. 2 (AT GRADE)	829.50			
FC FLOW SPLITTER (AT GRADE)	829.50			

LIGHTING:

A SEPARATE PHOTOMETRIC PLAN TO BE PROVIDED PRIOR TO FINAL APPROVAL.

UTILITY SCHEDULE (TYPICAL ALL SHEETS):

	GAS LINE
	POTABLE WATER
	NON-POTABLE WATER
	SANITARY SEWER
	PLANT DRAIN SYSTEM
	SLUDGE IRRIGATION SYSTEM

PAVEMENT SCHEDULE (TYPICAL ALL SHEETS):

	8" REINFORCED CONCRETE WITH 6" AB3 BASE
	8" ASPHALTIC CONCRETE WITH 6" AB3 BASE
	AB3 - CRUSHED LIMESTONE
	4" CONCRETE SIDEWALK
	LEED CERTIFIED CONCRETE PAVING WITH SRI ABOVE 29

NOT FOR CONSTRUCTION, PLANNING LAYOUT ONLY

Approved and Released

City of Lawrence
Douglas County
PLANNING & DEVELOPMENT SERVICES

Case No. _____
Approval Date: _____
Release Date: _____
Planner: _____
of _____ Sheets
Asst./Director: _____

2	CBC DRA B7A	INSTITUTIONAL DEVELOPMENT PLAN PLANNING	NO.	BY	CHK	APP
1	CBC DRA B7A	INSTITUTIONAL DEVELOPMENT PLAN PLANNING	NO.	BY	CHK	APP
9/15/14	DATE	SAVED:	XREF1:			
8/25/14	DATE	SAVED:	XREF2:			
		PLOTTED:	XREF3:			
		USER:	XREF4:			
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Kansas City, Missouri

BARTLETT & WEST
W.O. : 18365.002

CITY OF LAWRENCE, KANSAS
WAKARUSA WASTEWATER TREATMENT PLANT
LOCATION MAP & GENERAL NOTES

DESIGNED: CBC
DETAILED: CBC
CHECKED: DRA
APPROVED: BTA
DATE: AUGUST 2014

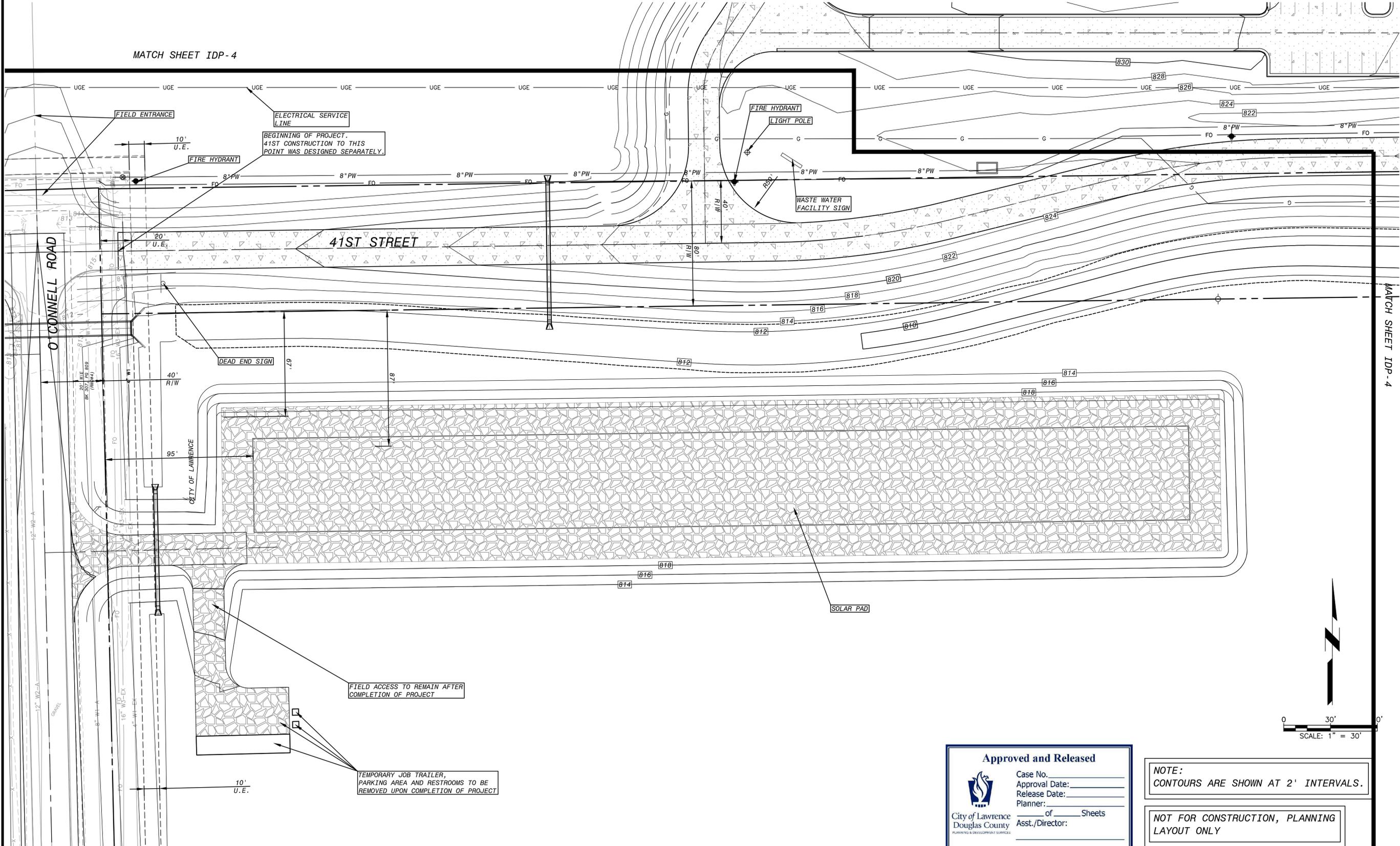
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PROJECT NO.
180984

IDP - 1
SHEET
1 OF 10

INSTITUTIONAL DEVELOPMENT PLAN

MATCH SHEET IDP-4



MATCH SHEET IDP-4

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CITY OF LAWRENCE, KANSAS
WAKARUSA WASTEWATER TREATMENT PLANT
SITE LAYOUT

DESIGNED:	CBC
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APPROVED:	BTA
DATE:	AUGUST 2014
PROJECT NO.	180984
IDP-3	SHEET 3 OF 10

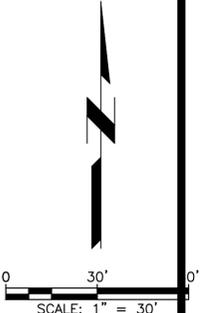
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NOTE:
CONTOURS ARE SHOWN AT 2' INTERVALS.

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INSTITUTIONAL DEVELOPMENT PLAN

9/15/14	INSTITUTIONAL DEVELOPMENT PLAN PLANNING	2	CBC DRA BTA
8/25/14	INSTITUTIONAL DEVELOPMENT PLAN PLANNING	1	CBC DRA BTA
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SAVED:			XREF2:
PLOTTED:			XREF3:
USER: CBC00998			XREF4:
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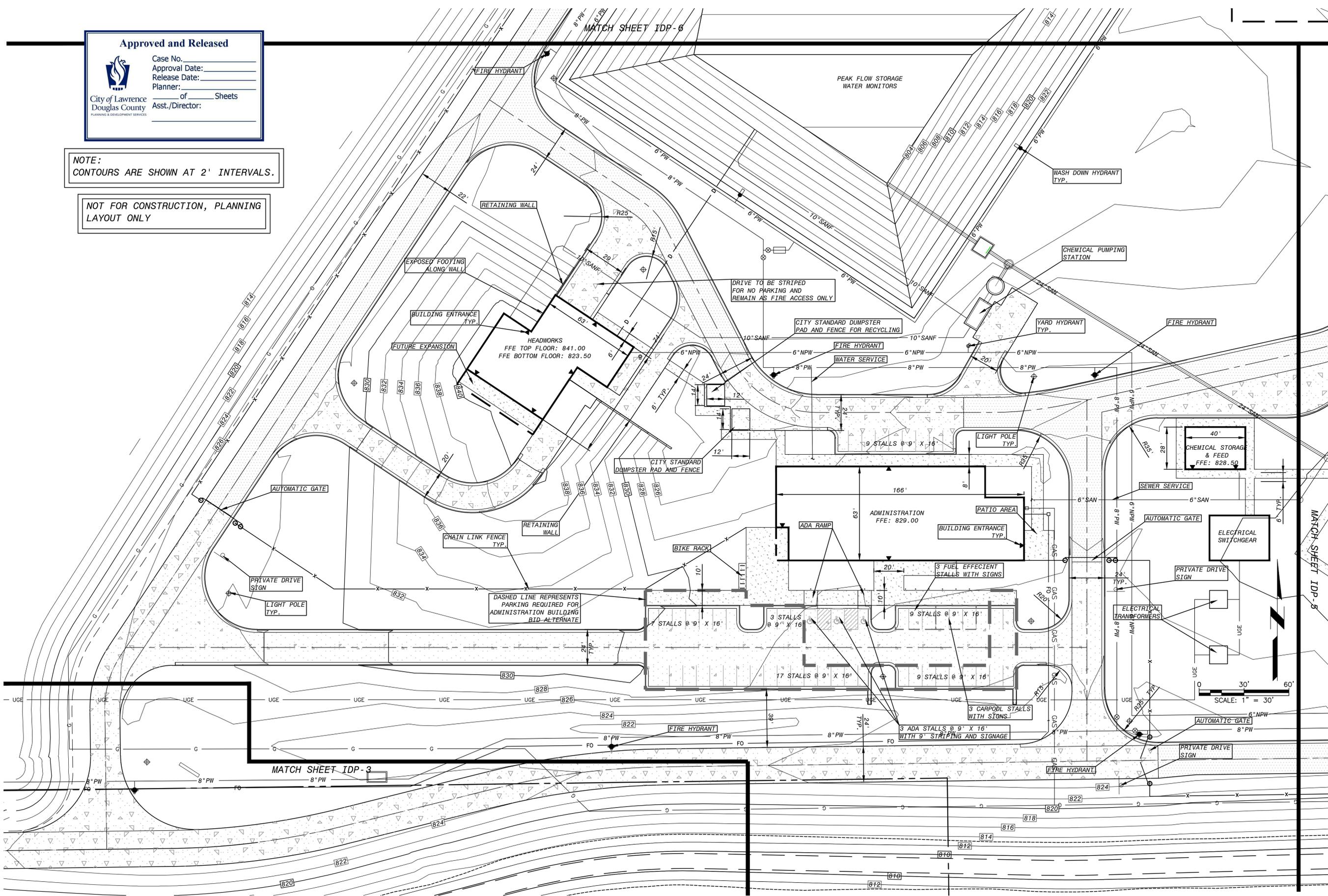
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CITY OF LAWRENCE, KANSAS
WAKARUSA WASTEWATER TREATMENT PLANT
 SITE LAYOUT

DESIGNED: CBC
 DETAILED: CBC
 CHECKED: DRA
 APPROVED: BTA
 DATE: AUGUST 2014

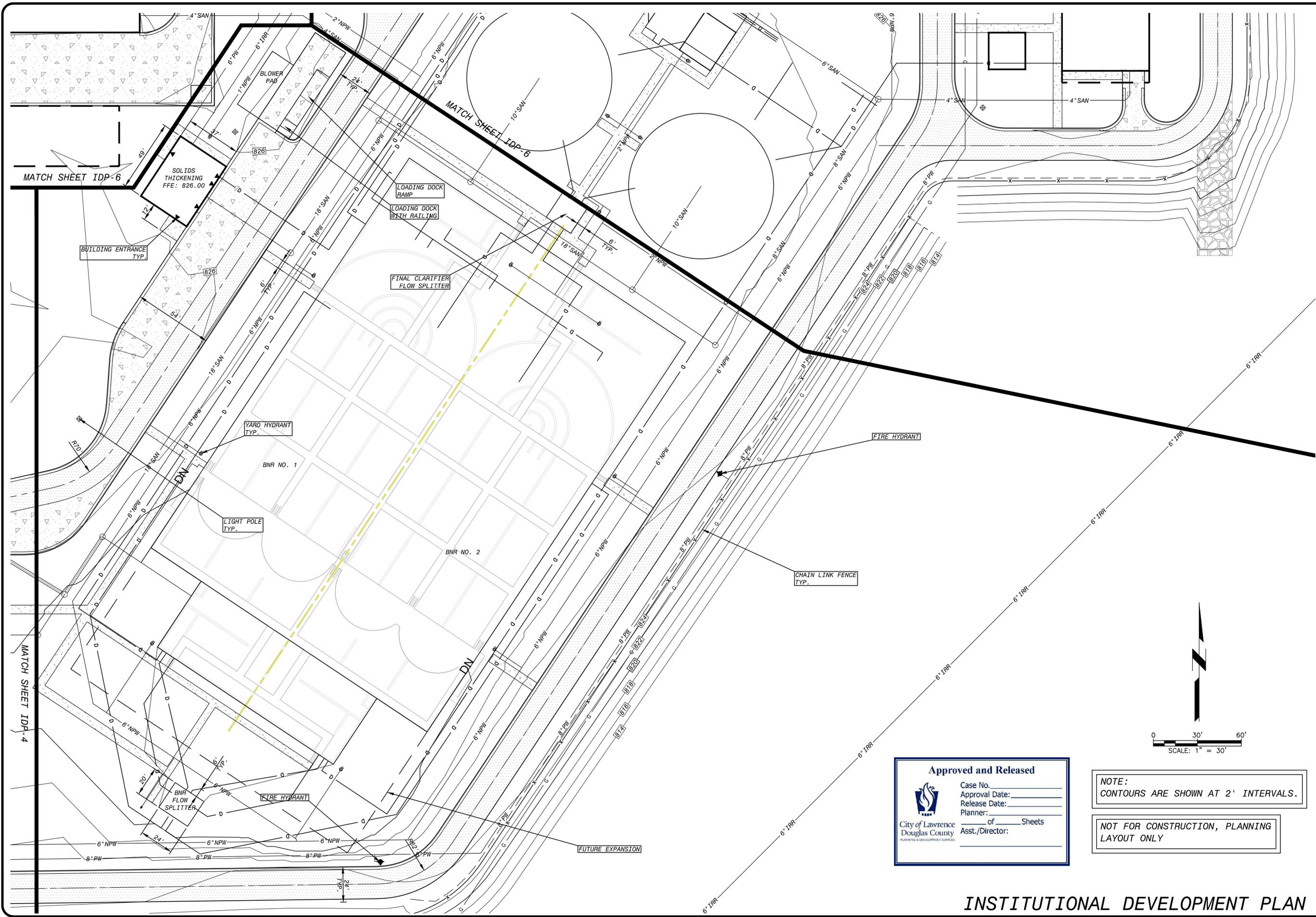
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PROJECT NO.
180984
IDP-4
 SHEET
 4 OF 10

INSTITUTIONAL DEVELOPMENT PLAN

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 Release Date: _____
 Planner: _____
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 Asst./Director: _____

City of Lawrence
Douglas County
PLANNING & DEVELOPMENT SERVICES

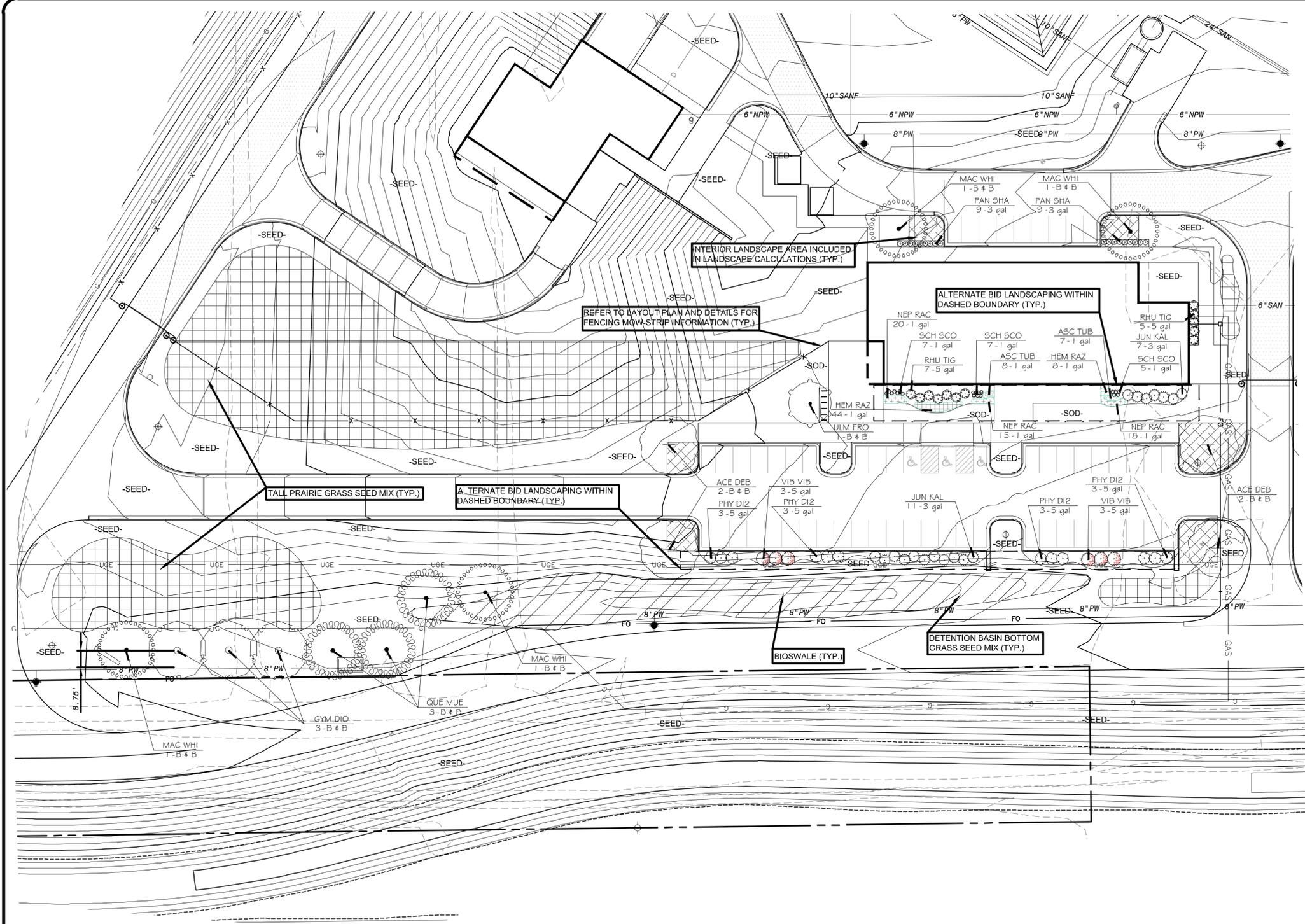
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<p>CITY OF LAWRENCE, KANSAS WAKARUSA WASTEWATER TREATMENT PLANT SITE LAYOUT</p>											
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INSTITUTIONAL DEVELOPMENT PLAN

Drawing name: W:\Proj\180984\18365.002\AutoCad\ldp_submittal\18365.002_Landscape-Plan.dwg Layout name: TREE LANDSCAPE PLAN Plotted by: CBC06098B Plotted on: Sep 15, 2014 - 2:03pm
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LANDSCAPE CALCULATIONS

STREET TREES 41ST STREET : 350 LF STREET FRONTAGE/40	= 8 TREES REQUIRED = 8 TREES PROVIDED
ALTERNATE BID - INTERIOR PARKING LOT LANDSCAPING 57 PARKING STALLS / 10	= 6 TREES REQUIRED = 6 TREES PROVIDED
	= 18 SHRUBS REQUIRED = 18 SHRUBS PROVIDED
40 SF LANDSCAPE AREA X 57 PARKING SPACES	= 2,280 SF LANDSCAPE AREA REQUIRED = 2,280 SF LANDSCAPE AREA PROVIDED
BASE BID - INTERIOR PARKING LOT LANDSCAPING 20 PARKING STALLS / 10	= 2 TREES REQUIRED = 6 SHRUBS REQUIRED
40 SF LANDSCAPE AREA X 20 PARKING SPACES	= 800 SF LANDSCAPE AREA REQUIRED

** ALTERNATE BID REPRESENTED ON PLANS. IF BASE BID IS CHOSEN LANDSCAPING TO BE REDUCED.

PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME / COMMON NAME	CONT.	CAL
ACE DEB	4	Acer platanoides 'Deborah' / Deborah Maple	B & B	2.5" Cal
GYM DIO	3	Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	B & B	2.5" Cal
MAC WHI	4	Maclura pomifera 'White Shield' / White Shield Osage Orange	B & B	2.5" Cal
QUE MUE	3	Quercus muehlenbergii / Chinkapin Oak	B & B	2.5" Cal
ULM FRO	1	Ulmus x Frontier / Frontier Elm	B & B	2.5" Cal

SHRUBS	QTY	BOTANICAL NAME / COMMON NAME	COND.	SIZE
JUN KAL	18	Juniperus x pfitzeriana 'Kallay's Compact' / Juniper	CONT.	3 gal
PAN SHA	18	Panicum virgatum 'Shenendoah' / Burgundy Switch Grass	CONT.	3 gal
PHY DI2	12	Physocarpus opulifolius 'Diablo' / Ninebark	CONT.	5 gal
RHU TIG	12	Rhus typhina 'Tiger Eyes' / Tiger Eyes Sumac	CONT.	5 gal
SCH SCO	19	Schizachyrium scoparium 'The Blues' / The Blues Little Bluestem	CONT.	1 gal
VIB VIB	6	Viburnum x burkwoodii 'Mohawk' / Viburnum	CONT.	5 gal

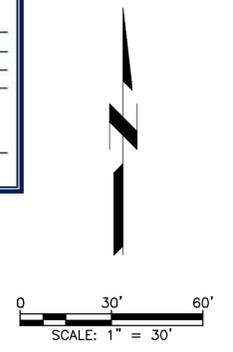
SHRUB AREAS	QTY	BOTANICAL NAME / COMMON NAME	COND.	SIZE	SPACING
ASC TUB	15	Asclepias tuberosa / Butterfly Milkweed	CONT.	1 gal	18" o.c.
HEM RAZ	52	Hemerocallis x 'Razzle Dazzle' / Daylily	CONT.	1 gal	18" o.c.
NEP RAC	53	Nepeta racemosa 'Walker's Low' / Catmint	CONT.	1 gal	18" o.c.

NOTE: LANDSCAPING SHALL NOT BE PLACED WITHIN UTILITY EASEMENTS, WITHIN 8 FEET OF THE PUBLIC WATERLINE, OR WITHIN 8 FEET OF THE PUBLIC SANITARY SEWER (TYP.).

NOTE: VERIFY PROTOCOL FOR MULCH INSTALLATION WITH OWNER

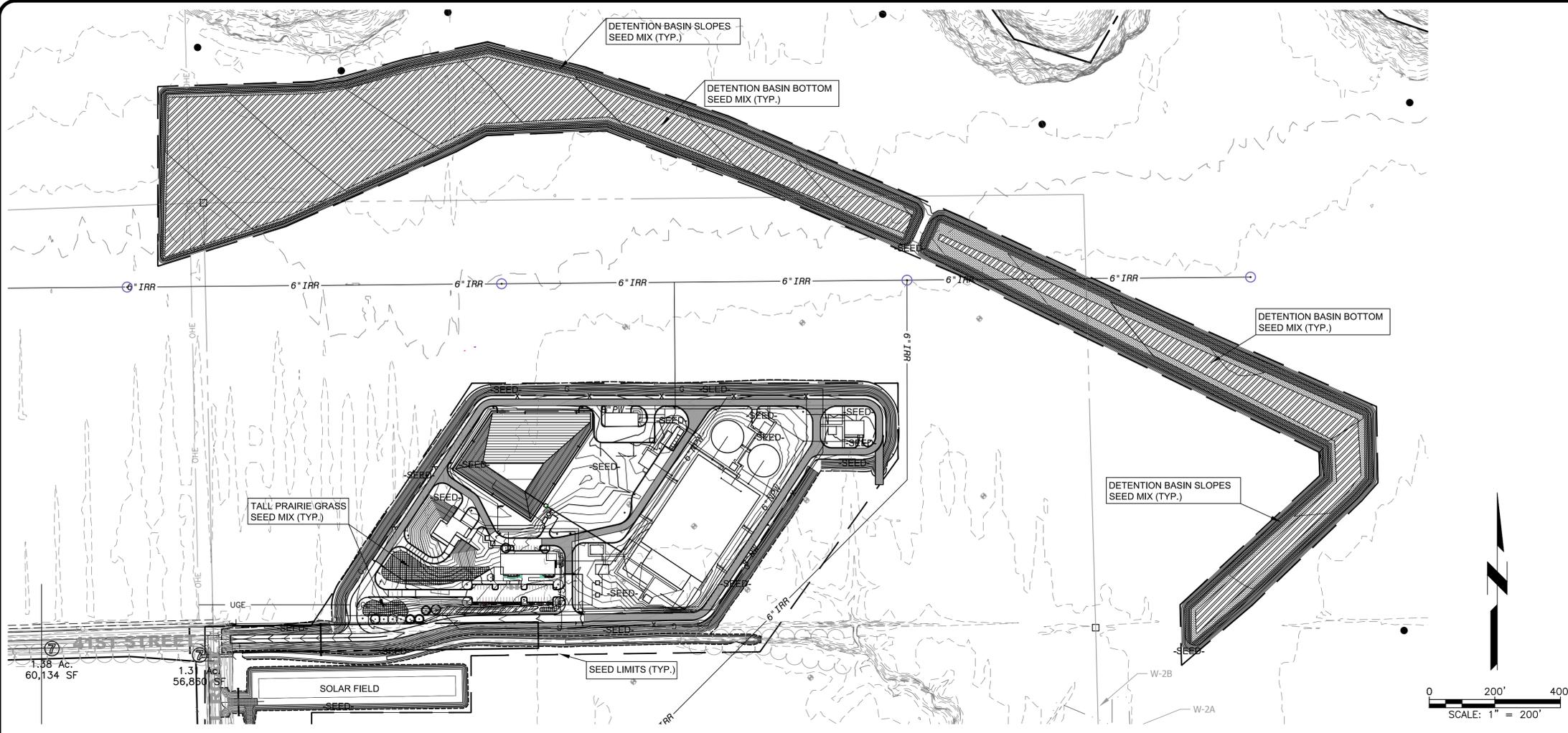
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<p>CITY OF LAWRENCE, KANSAS</p> <p>WAKARUSA WASTEWATER TREATMENT PLANT</p> <p>LANDSCAPE PLAN</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED: KES</td> </tr> <tr> <td>DETAILED: KES</td> </tr> <tr> <td>CHECKED: DRA</td> </tr> <tr> <td>APPROVED: BTA</td> </tr> <tr> <td>DATE: AUGUST 2014</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"> </td> </tr> <tr> <td style="text-align: center; font-size: 8px;"> IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE </td> </tr> <tr> <td style="text-align: center;"> PROJECT NO. 180984 </td> </tr> <tr> <td style="text-align: center;"> IDP-7 SHEET 7 OF 10 </td> </tr> </table>	DESIGNED: KES	DETAILED: KES	CHECKED: DRA	APPROVED: BTA	DATE: AUGUST 2014		IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	PROJECT NO. 180984	IDP-7 SHEET 7 OF 10
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IDP-7 SHEET 7 OF 10										

INSTITUTIONAL DEVELOPMENT PLAN



- LANDSCAPE NOTES:**
- GENERAL CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE (1) YEAR FROM DATE OF PROJECT SUBSTANTIAL COMPLETION.
 - ALL PLANT MATERIALS SHALL MEET MINIMUM REQUIREMENTS SHOWN IN THE "AMERICAN STANDARDS FOR NURSERY STOCK" (ANSI Z60.1-2004).
 - EACH TREE AND SHRUB SHALL BE SECURELY LABELED WITH A WATERPROOF TAG INDICATING BOTANICAL NAME AND COMMON NAME FOR DELIVERY TO SITE.
 - NO PLANT MATERIAL SHALL BE SUBSTITUTED WITHOUT THE APPROVAL OF THE OWNER. ALL PLANTING LOCATIONS FOR TREES AND SHRUBS SHALL BE FLAGGED BY THE CONTRACTOR AND APPROVED BY THE OWNER, PRIOR TO INSTALLATION.
 - ALL DISCREPANCIES AND/OR FIELD CHANGES SHALL BE REPORTED TO THE OWNER FOR APPROVAL PRIOR TO IMPLEMENTATION. WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS OR OBSTRUCTIONS, LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER BEFORE PLANTING.
 - THE GENERAL CONTRACTOR SHALL VERIFY LOCATION OF AND PROTECT ALL UTILITIES AND STRUCTURES. DAMAGE TO UTILITIES AND STRUCTURES SHALL BE REPAIRED BY THE GENERAL CONTRACTOR TO THE SATISFACTION OF THE OWNER.
 - THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER CONTRACTORS ON SITE THROUGHOUT THE CONSTRUCTION PROCESS.
 - ALL SHRUB AND TREE PLANTING AREAS SHALL BE EXCAVATED AND BACK-FILLED WITH PLANT MIX. DISCARD SUBSOIL REMOVED FROM PLANTING AREA EXCAVATION; DO NOT MIX WITH PLANT MIX OR USE AS BACK-FILL. SEE SHRUB & TREE PLANTING DETAILS FOR COMPLETE PLANTING PREPARATION. PREPARE PLANTING AREAS AND INSTALL PLANTS COMPLETELY, PRIOR TO SEEDING.
 - PLANT MIX SHALL CONSIST OF TOPSOIL COMPLETELY FREE OF DEBRIS, ROCK IN EXCESS OF 1" IN DIAMETER, STICKS AND CLAY. MIX 80% TOPSOIL WITH 20% CITY COMPOST CITY TO PROVIDE COMPOST CONTRACTOR TO HAUL FROM STORAGE LOCATION.
 - ALL SHRUBS SHALL BE INSTALLED IN PROPOSED PLANTING BEDS AND ALL MULCH FOR THE PROJECT TO BE PROVIDED BY THE CITY (RECYCLED HARDWOOD TREE MULCH). CONTRACTOR TO HAUL TO SITE FROM CITY WOOD LOT.
 - ALL PLANTED SURFACES SHALL RECEIVE EMULSION TYPE, FILM FORMING, ANTI-DESSICANT AGENT DESIGNED TO PERMIT TRANSPIRATION, BUT RETARD EXCESSIVE LOSS OF MOISTURE FROM PLANTS. ANTI-DESSICANT TO BE DELIVERED IN MANUFACTURER'S FULLY IDENTIFIED CONTAINERS AND MIXED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. APPLY PRIOR TO APPLICATION OF MULCH.
 - ALL DISTURBED AREAS NOT DESIGNATED AS PAVEMENT OR PLANTING BEDS SHALL BE SEED OR SODDED. SOD SHALL BE TURF TYPE TALL FESCUE BLEND OR APPROVED EQUAL AT THE DIRECTION OF THE OWNER. SEED SHALL BE TURF TYPE TALL FESCUE BLEND SUCH AS WINNING COLORS OR APPROVED EQUAL AT THE DIRECTION OF THE OWNER. ALL TURF AREAS SHALL CONSIST OF A MINIMUM 8" THICKNESS TOPSOIL FREE OF CLAY, DEBRIS, STICKS OR ROCKS IN EXCESS OF 1" IN DIAMETER. ALL TOPSOIL AREAS SHALL BE FINE GRADED AND RAKED, REMOVING RIDGES AND FILLING DEPRESSIONS AS REQUIRED TO MEET FINISHED GRADES AND CREATE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PRIOR TO SODDING, MIXTEN PREPARED TOPSOIL IF GROUND IS DRY AFTER ONE MONTH FOLLOWING SEEDING, APPLY FERTILIZER AT THE MANUFACTURER'S RECOMMENDED RATE FOR NEWLY ESTABLISHED LAWS. AFTER TWO MONTHS FOLLOWING SODDING, APPLY GYPSUM AT THE RATE OF 100 LBS. PER 1000 SQ. FEET. THE GENERAL CONTRACTOR SHALL MAINTAIN ALL PLANTED OR TURF AREAS THROUGHOUT THE WARRANTY PERIOD AND SHALL PERFORM OPERATIONS SUCH AS ROLLING, REGRADING, RESODDING, RESEEDING AND/OR REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH TURF SURFACE, FREE OF ERODED OR BARE AREAS TO THE SATISFACTION OF THE OWNER.
 - ALL UTILITY INFORMATION SHOWN HEREIN IS BASED ON THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF DESIGN. THE CONTRACTOR SHALL VERIFY ALL UTILITY DEPTHS AND LOCATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES TO FIELD LOCATE AND/OR ADJUST THEIR UTILITY AS REQUIRED FOR CONSTRUCTION. ALL UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND THE ENGINEER ASSUMES NO LIABILITY FOR SAME.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING THE AREAS AND QUANTITIES OF SEED NEEDED FOR OPTIMUM COVERAGE.
 - ALL PLANTING BED EDGING IS COL-MET STEEL EDGING OR EQUAL PER DIRECTION OF THE OWNER. TREE RING EDGING TO BE NATURAL EARTH EDGE. LINES AND CURVES SHALL BE CONTINUOUS AND SMOOTH, MEETING THE DESIGN INTENT SHOWN ON THE DRAWINGS.
 - REMOVE ANY EXCESS SOIL AND DEBRIS FROM AREA AND DISPOSE OF IN AN APPROVED MANNER.
 - SPACING SHOWN FOR PLANTS IS FOR INFORMATION ONLY AND SHALL BE ADJUSTED AS REQUIRED TO PROVIDE UNIFORM SPACING WITHIN PLANTING BEDS.
 - PROTECTION MEASURES FOR EXISTING VEGETATION SHALL INCLUDE A REQUIREMENT THAT THE DRIP-LINE AREA (UNDER THE CANOPY) SHALL BE FENCED WITH CONSTRUCTION FENCING PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE AREA. SIGNAGE INDICATING THAT "NO DEVELOPMENT ACTIVITY INCLUDING GRADING, TRENCHING, OR STORING OF VEHICLES OR MATERIALS MAY OCCUR WITHIN THIS AREA".
 - ALL IRRIGATION NEEDS SHALL BE COORDINATED WITH CRYSTAL MILES, CITY OF LAWRENCE HORTICULTURE MANAGER.

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BLACK & VEATCH
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Black & Veatch Corporation
Kansas City, Missouri

BARTLETT & WEST
W.O. - 180985_002

TALL GRASS PRAIRIE SEED MIX: 12 LBS/AC

GRASSES: 10 LBS/AC

Sideoats Grama	Bouteloua curtipendula
Little Bluestem	Schizachyrium scoparium
Canada Wildrye	Elymus canadensis
Indian Grass	Sorghastrum nutans
Weeping Lovegrass	Eragrostis curvula

FORBS: 2 LBS/AC

Butterfly Milkweed	Asclepias tuberosa
Prairie Blazing Star	Liatris pycnostachya
Blackeyed Susan	Rudbeckia hirta
Prairie Coreopsis	Coreopsis palmata
Purple Coneflower	Echinacea purpurea
Smooth Penstemon	Penstemon digitalis
Purple Prairie Clover	Petalostemum purpureum 'Kaneb'
Pitcher Sage	Salvia pitcheri 'Nekan'
Upright Coneflower	Ratibida columnifera

DETENTION BASIN SLOPES SEED MIX: 20 LBS/AC

GRASSES: 17 LBS/AC

Big Bluestem	Andropogon gerardii
Little Bluestem	Schizachyrium scoparium
Side Oats Grama	Bouteloua curtipendula
Switchgrass	Panicum virgatum
Canada Wild Rye	Elymus canadensis

FORBS: 3 LBS/ACRE

Purple Prairie Clover	Dalea purpurea
Gray Headed Coneflower	Ratibida pinnata

DETENTION BASIN BOTTOM SEED MIX: 20 LBS/AC

GRASSES: 17 LBS/AC

Switchgrass	Panicum virgatum
Virginia Wild Rye	Elymus virginicus
Indian Grass	Sorghastrum nutans
Prairie Cordgrass	Spartina pectinata
Big Bluestem	Andropogon gerardii

FORBS: 3 LBS/AC

New England Aster	Symphotrichum novae-angliae
Bur Marigold	Bidens aristosa

PRAIRIE GRASS SEED MIX LEGEND

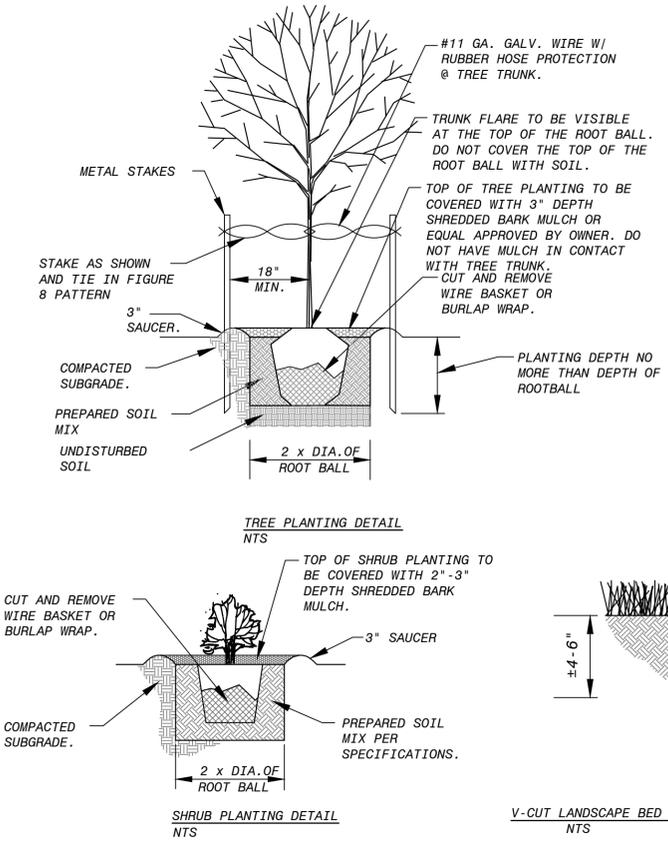
- TALL GRASS PRAIRIE MIX (±.55 AC)
- DETENTION BASIN SLOPES (±7.84 AC)
- DETENTION BASIN BOTTOM (±13.30 AC)

*ALTERNATE BID QUANTITIES REPRESENTED. BASE BID TALL GRASS PRAIRIE MIX INCREASES.

Approved and Released

Case No. _____
Approval Date: _____
Release Date: _____
Planner: _____
Asst./Director: _____
of _____ Sheets

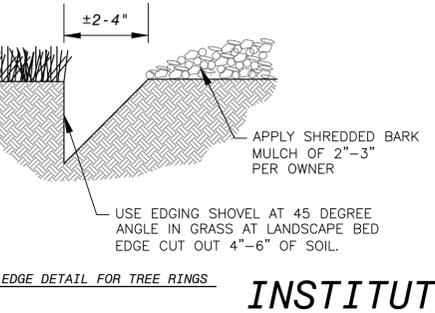
City of Lawrence
Douglas County
PLANNING & DEVELOPMENT SERVICES



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CITY OF LAWRENCE, KANSAS
WAKARUSA WASTEWATER TREATMENT PLANT
LANDSCAPING PLAN

DESIGNED: KES
DETAILED: KES
CHECKED: DRA
APPROVED: BTA
DATE: AUGUST 2014

PROJECT NO.
180984

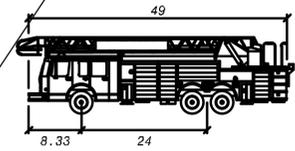
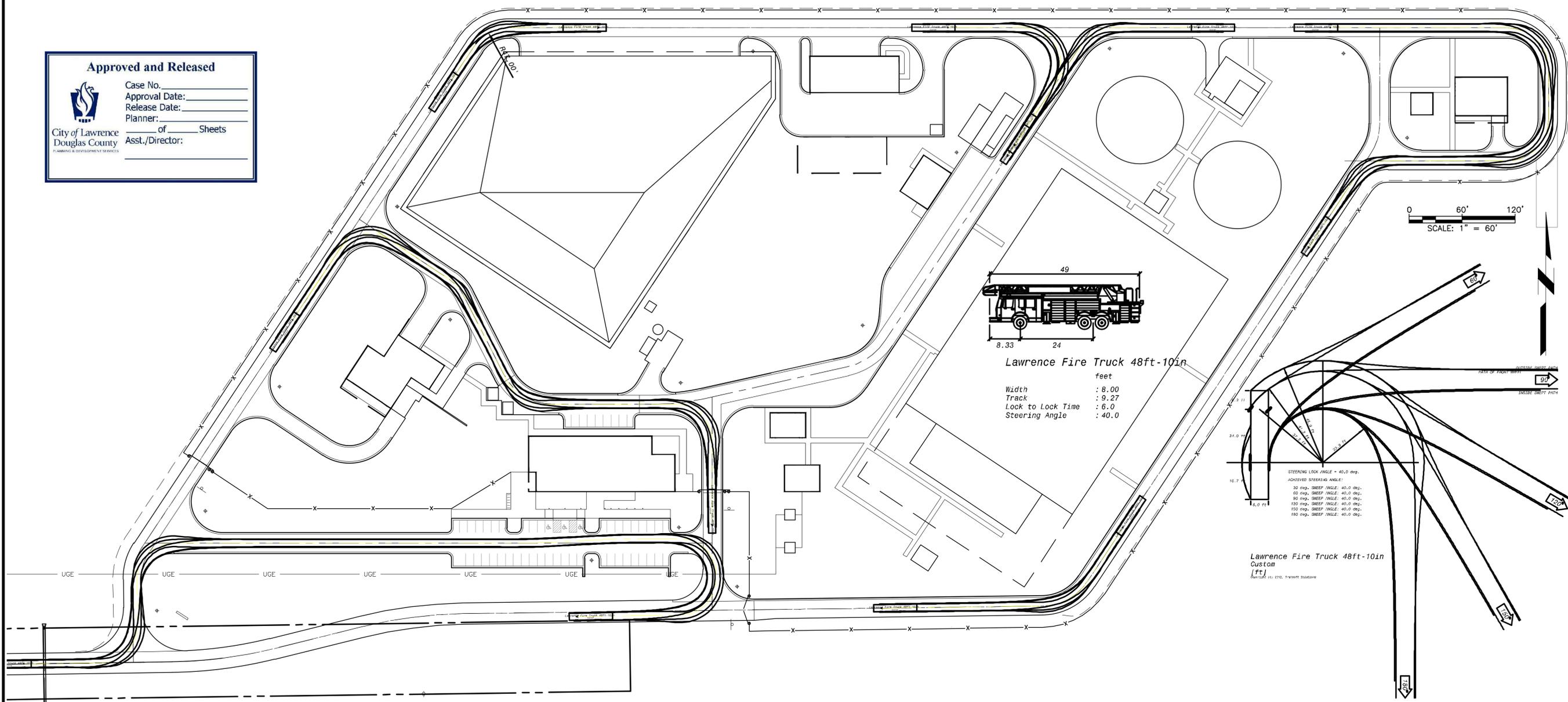
IDP-8
SHEET
8 OF 10

INSTITUTIONAL DEVELOPMENT PLAN

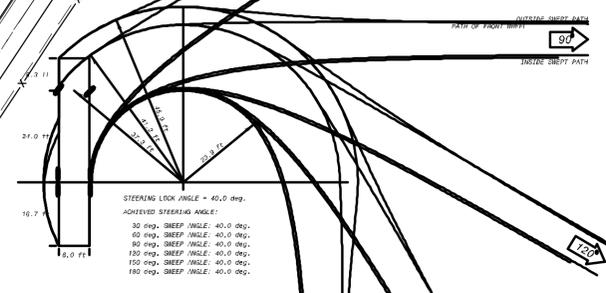
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Approved and Released

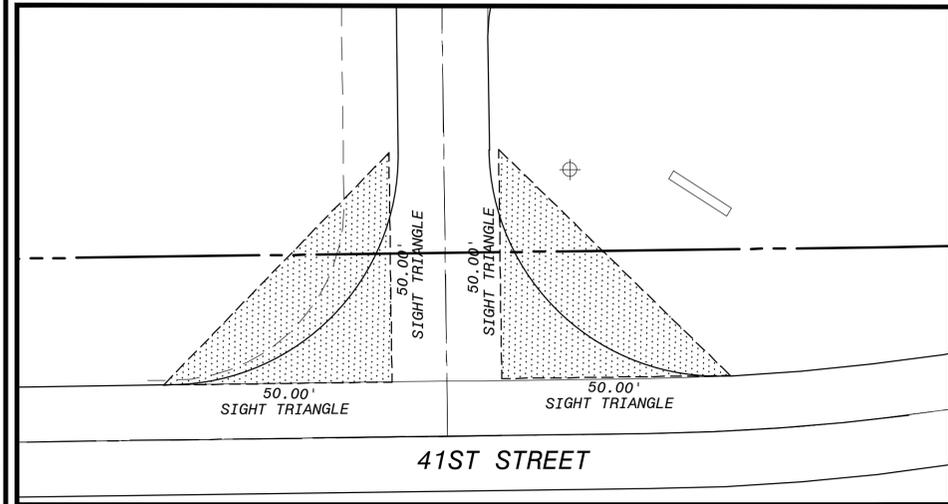
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 Release Date: _____
 Planner: _____ of _____ Sheets
 Asst./Director: _____



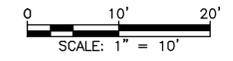
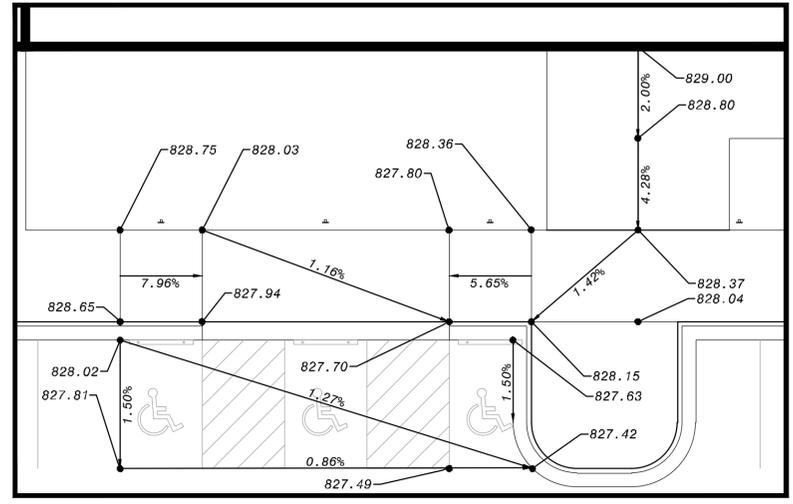
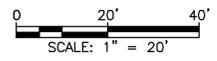
Lawrence Fire Truck 48ft-10in
 feet
 Width : 8.00
 Track : 9.27
 Lock to Lock Time : 6.0
 Steering Angle : 40.0



Lawrence Fire Truck 48ft-10in
 Custom
 (ft)
Source: (c) 2012, PARKITE, BURGESS



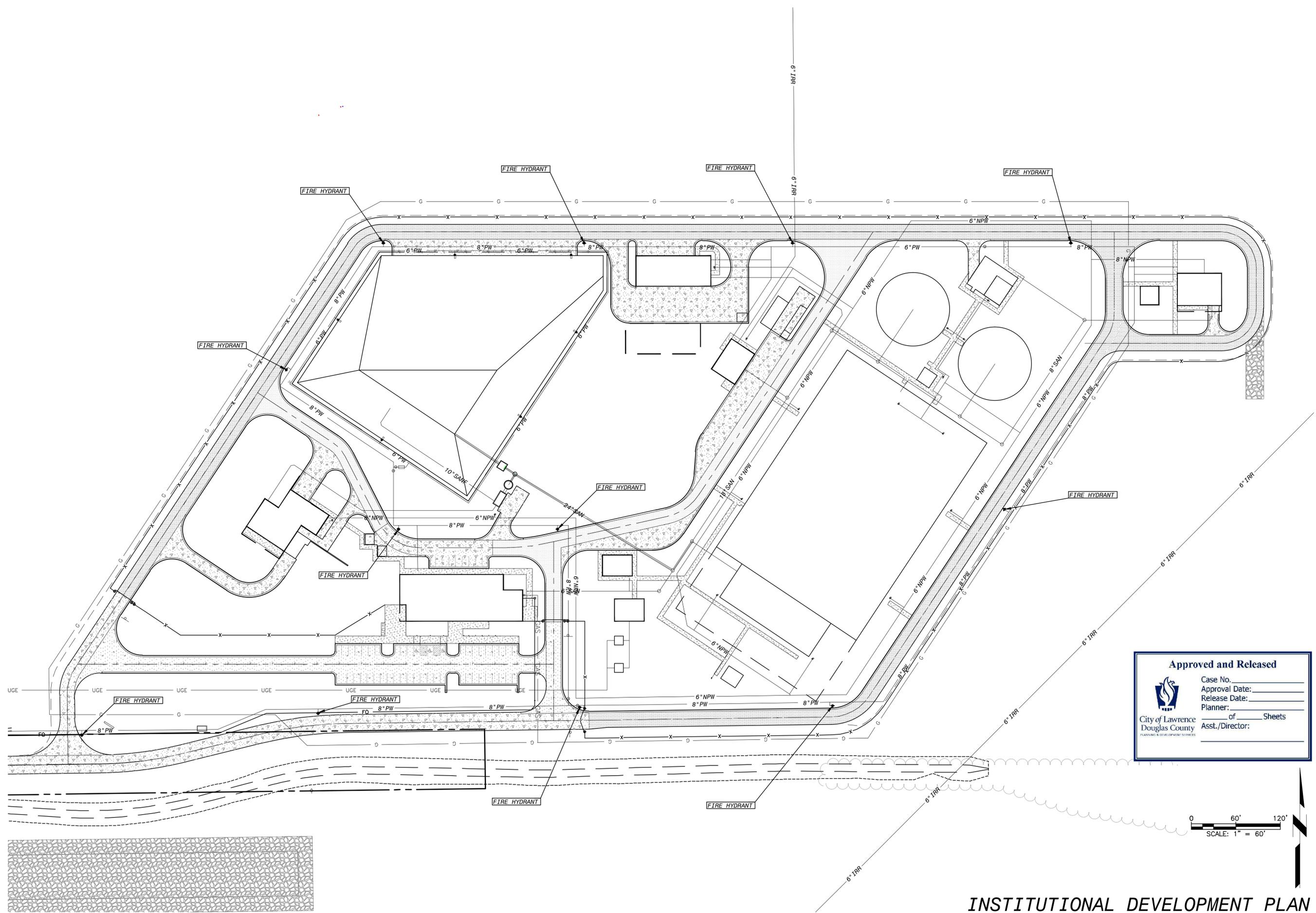
SITE TRIANGLE CRITERIA
 CODE OF THE CITY OF LAWRENCE, KANSAS
 ARTICLE 11. GENERAL DEVELOPMENT STANDARDS
 PAGE 11-9
 Sec. 20-1102
 No fence, wall, hedge, landscaping, sign or other material of structure that will obstruct vision between a height of 3 feet and 10 feet shall be erected, placed or maintained within the triangular area formed by an imaginary line starting at the point of intersection of corner lot lines and extending 25 feet from their point of intersection.
 Additionally the City Code, Section 18-109(1) requires a 50 foot sight triangle from the intersection of the curb lines and states that no shrubs or bushes shall be taller than 36 inches.



INSTITUTIONAL DEVELOPMENT PLAN

	BLACK & VEATCH Building a world of difference Black & Veatch Corporation <small>Kansas City, Missouri</small>	BARTLETT & WEST <small>W. O. - 18365.002</small>	CITY OF LAWRENCE, KANSAS MAKARUSA WASTEWATER TREATMENT PLANT FIRE TRUCK ACCESS, ADA PARKING & SITE TRIANGLE EXHIBITS
9/15/14 8/25/14 DATE PW: SW: PLOTTED: USER: C9C0D998	INSTUTIONAL DEVELOPMENT PLAN PLANNING INSTUTIONAL DEVELOPMENT PLAN PLANNING REVISIONS AND RECORD OF ISSUE NO. BY CHK APP	XREF1: XREF2: XREF3: XREF4:	DESTIGNED: CWC DETAILED: RLW CHECKED: BTA APPROVED: BTA DATE: AUGUST 2014
PROJECT NO. 180984		IDP-9 SHEET 9 OF 10	

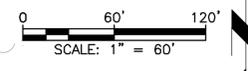
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Case No. _____
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INSTITUTIONAL DEVELOPMENT PLAN

INSTITUTIONAL DEVELOPMENT PLAN PLANNING REVISIONS AND RECORD OF ISSUE DATE: 9/15/14 NO.: 2 BY: C5000998 CHECKED BY: BTA	XREF1: XREF2: XREF3: XREF4:
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BLACK & VEATCH
 Building a world of difference
Black & Veatch Corporation
 Kansas City, Missouri

BARTLETT & WEST
W. O. : 18365.002

CITY OF LAWRENCE, KANSAS
WAKARUSA WASTEWATER TREATMENT PLANT
FIRE HYDRANT LOCATION

DESIGNED: CBC
DETAILED: CBC
CHECKED: BTA
APPROVED: BTA
DATE: AUGUST 2014
<small>IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE</small>
PROJECT NO. 180984
IDP - 10 SHEET 10 OF 10