

PROJECT TEAM:

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UTILITY CONTACTS:

WATER / SANITARY SEWER:

WAGONER COUNTY RURAL WATER DIST. #4
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ELECTRIC:

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212 E. 6TH STREET
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5848 E. 15TH STREET
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STORM SEWER:

CITY OF BROKEN ARROW
485 NORTH POPLAR AVENUE
BROKEN ARROW, OK 74013
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11811 E. 51ST STREET
TULSA, OK 74146
CONTACT: CHUCK WATSON
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WHERE & MEANS MORE.

PRELIMINARY SITE DRAWINGS
STORE #837
24055 E. HIGHWAY 51
BROKEN ARROW, OK 74014

REV	SHEET INDEX	
1	COVER SHEET	C0.0
2	SITE PLAN	C1.1
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5	UTILITY PLAN	C3.1
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11	CANOPY ELEVATIONS	A1.2
12	TRASH ENCLOSURE ELEVATIONS	A1.3
13	POLE SIGN, LOGO & FLAGPOLE DETAILS	A1.4

BENCHMARKS:

BENCHMARK #1
3/8" IRON PIN WITH CAP STAMPED "SACK" FOUND AT NORTHWEST CORNER OF LOT 1 BLOCK 1, BOL ADDITION
ELEV.=712.02 (NAVD 1988)

BENCHMARK #2 (TEMPORARY)
SQUARE CUT IN SOUTH CURB LINE ADJACENT TO SIDEWALK OF NORTH DRIVE ENTRANCE INTO EXIST. KUM & GO APPROX. 210 FEET NORTH OF THE HIGHWAY 51 & ONETA RD. INTERSECTION
ELEV.=713.55 (NAVD 1988)

BENCHMARK #3 (CITY)
5/8" REBAR-1 1/2" ALUMINUM CAP FLUSH-STAMPED "BA 20", SET ON THE NORTH SIDE OF 101ST ST. APPROX. 0.50 MILE WEST OF ONETA RD.
ELEV.=687.187 (NAVD 1988)

FLOOD ZONE:

ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER: 40145C0115H, EFFECTIVE DATE: APRIL 17, 2012, THIS PROPERTY DOES NOT LIE WITHIN A DESIGNATED FLOOD PLANE AND IS ZONE X.

LEGAL DESCRIPTION:

A REPLAT OF LOT 1, BLOCK 1, BOL ADDITION BEING A PART OF THE EAST HALF OF THE SOUTHEAST QUARTER (E/2 SE/4) OF SECTION 21, TOWNSHIP 18 NORTH, RANGE 15 EAST OF THE INDIAN BASE AND MERIDIAN, WAGONER COUNTY, STATE OF OKLAHOMA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF THE SOUTHEAST QUARTER OF SECTION 21, TOWNSHIP 18 NORTH, RANGE 15 EAST; THENCE SOUTH 00 DEGREES 10 MINUTES 50 SECONDS WEST ALONG THE EAST LINE OF THE SOUTHEAST QUARTER A DISTANCE OF 1,660.00 FEET; THENCE NORTH 89 DEGREES 38 MINUTES 10 SECONDS WEST, A DISTANCE OF 24.75 FEET TO THE POINT OF BEGINNING, ALSO BEING DESCRIBED AS THE NORTHEAST CORNER OF LOT 10 OF THE PARTIALLY VACATED PLAT OF PRAIRIE DALE ADDITION, BY CERTIFICATE TO VACATE, FILED IN BOOK 1990 AT PAGE 602 IN THE COUNTY CLERKS OFFICE OF WAGONER COUNTY, OKLAHOMA; THENCE SOUTH 00 DEGREES 10 MINUTES 50 SECONDS WEST ALONG THE EAST LINE OF SAID VACATED PRAIRIE DALE ADDITION AND PARALLEL TO THE EAST LINE OF SAID SECTION 21, A DISTANCE OF 341.19 FEET; THENCE NORTH 66 DEGREES 52 MINUTES 08 SECONDS WEST, A DISTANCE OF 388.77 FEET TO A POINT THAT IS THE SOUTHWEST CORNER OF LOT 11 OF SAID VACATED PRAIRIE DALE ADDITION, ALSO BEING THE SOUTHWEST CORNER OF SAID LOT 1, BLOCK 1 BOL ADDITION; THENCE NORTH 00 DEGREES 13 MINUTES 31 SECONDS EAST, A DISTANCE OF 190.39 FEET TO THE NORTHWEST CORNER OF SAID LOT 10 OF SAID VACATED PRAIRIE DALE ADDITION, ALSO BEING THE NORTHWEST CORNER OF SAID LOT 1, BLOCK 1 BOL ADDITION; THENCE SOUTH 89 DEGREES 41 MINUTES 32 SECONDS EAST, A DISTANCE OF 357.85 FEET TO THE POINT OF BEGINNING. SAID TRACT CONTAINING 95,137 SQUARE FEET OR 2.184 ACRES, MORE OR LESS.

GENERAL NOTES:

1. BASIS OF BEARINGS: PLATTED BEARING ALONG NORTH LINE OF 'BOL ADDITION', ACCORDING TO THE RECORDED PLAT THEREOF (PLAT NO. PLC5-409B).
2. VERTICAL DATUM USED IS NAVD 88.

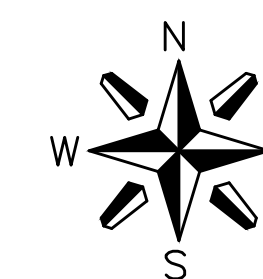
UTILITY COORDINATION BLOCK:

DATE SUBMITTED:

WATER COMPANY.....RICK LANG
ELECTRIC COMPANY.....MARK BUTLER
GAS COMPANY.....JAMES NOBLES
TELEPHONE COMPANY.....CHUCK WATSON



VICINITY MAP
NOT TO SCALE



ZONING INFORMATION	
CN (COMMERCIAL NEIGHBORHOOD)	
MINIMUM LOT AREA	12,000 S.F.
MINIMUM LOT WIDTH	100'
SITE AREA PER UNIT	NO REQUIREMENT
FRONT YARD SETBACK (E. HIGHWAY 51)	40' (PUD)
INTERIOR SIDE YARD SETBACK (WEST)	20'
STREET SIDE YARD SETBACK (ONETA RD.)	50'
REAR YARD SETBACK (NORTH)	30'
MAXIMUM HEIGHT	50'
MAXIMUM BUILDING COVERAGE	NO REQUIREMENT
MAXIMUM IMPERVIOUS COVERAGE	90% (PUD)
MAXIMUM FLOOR AREA RATIO	NO REQUIREMENT

SITE DATA		
CANOPY / DISPENSER ARRANGEMENT	7 DISPENSERS (SINGLE)	
TYPE OF USE	CONVENIENCE STORE WITH FUEL	
HEIGHT	HIGHEST BUILDING ELEVATION	21'-6" (MIN.)
	TOP OF PARAPET ELEVATION	19'-10" & 16'-10" (MIN.)
	CANOPY	HIGHEST ELEVATION 20'-9" (MIN.) 18'-6" TOP OF FASCIA (MIN.) 15'-6" CLEARANCE (MIN.)
GROSS FLOOR AREA	6,217 S.F.	
GROSS CANOPY AREA	4,706 S.F.	
GROSS LOT AREA	±74,747 S.F. (±1.716 ACRES)	
FAR (INCLUDING CANOPY)	0.1475	
BUILDING COVERAGE	6,217 S.F. (8.3%)	
LANDSCAPE COVERAGE	28,831 S.F. (38.6%)	
PARKING/DRIVE/SIDEWALK COVERAGE	39,699 S.F. (53.1%)	
BICYCLE PARKING	2 SPACES	
REQUIRED PARKING	STANDARD	30
	ADA	2
	TOTAL	32
PROVIDED PARKING	PARKING RATIO = 1 CAR / 200 S.F.	
	STANDARD	24
	ADA	1
	TOTAL	25
PARKING RATIO = 0.79 CARS / 200 S.F.		

THIS PROJECT IS REGISTERED UNDER THE LEED GREEN BUILDING CERTIFICATION PROGRAM.



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#837 - BROKEN ARROW, OK
24055 E. HIGHWAY 51

COVER SHEET

KG PROJECT TEAM
RDR: JWH
SDM: NDH
CPM: SDN

REVISION DESCRIPTION	DATE

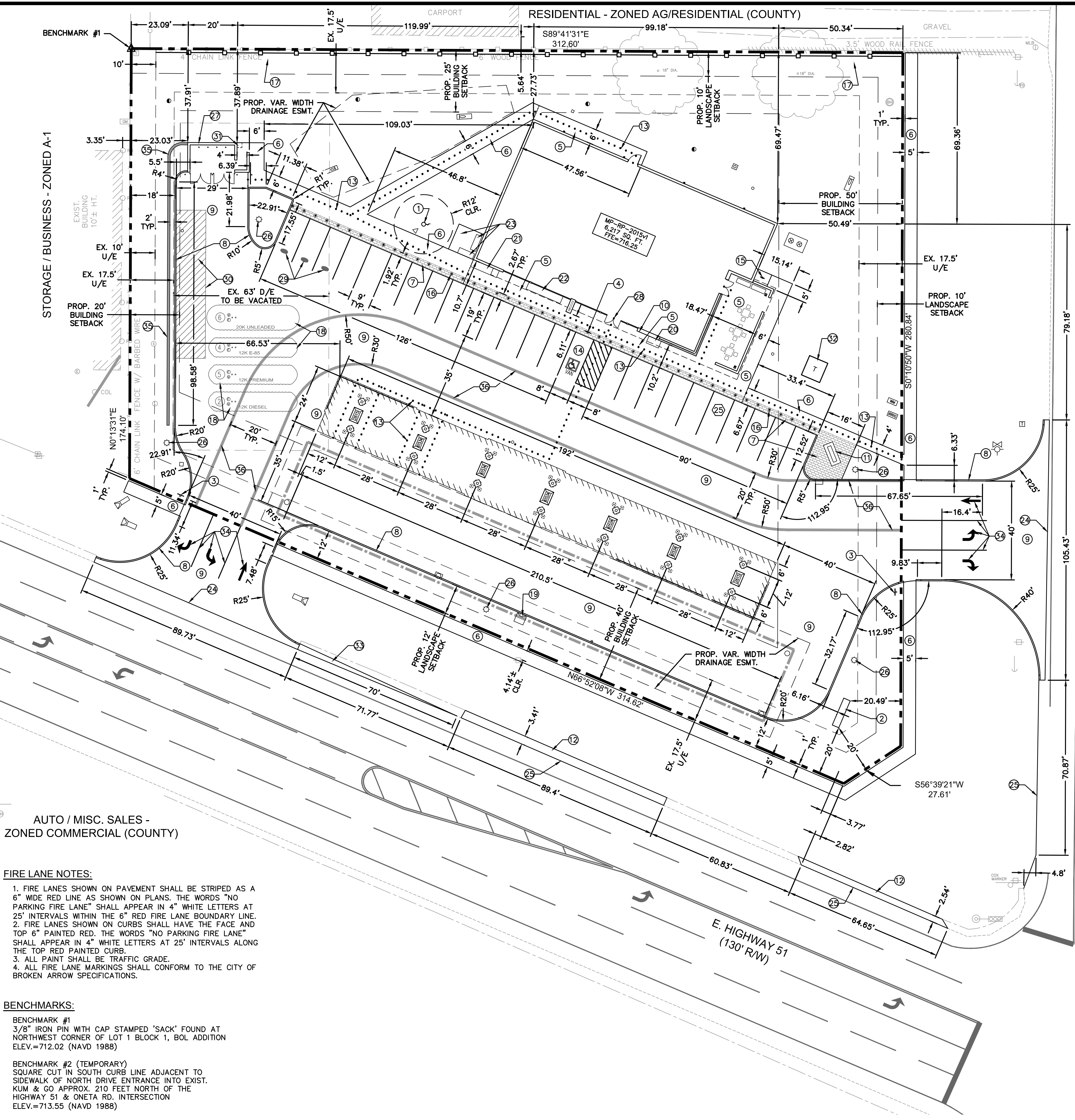
DATE: 12-09-15
SHEET NUMBER:
C0.0
1 OF 13

OLSSON ASSOCIATES
550 S. LOUIS ST.
SPRINGFIELD, MO 65806
TEL: 417-890-8802
FAX: 417-890-8808
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USER: mchodwick

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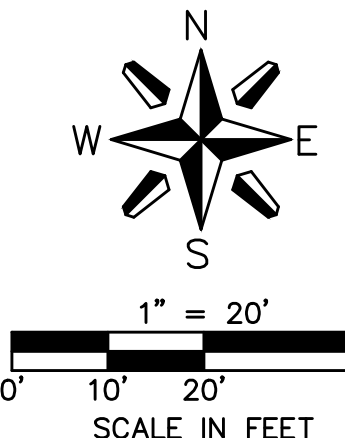



FLAG NOTES:

- 1 PROPOSED FLAGPOLE (40' HEIGHT), SEE DETAIL SHEET C5.2
- 2 PROPOSED MONUMENT SIGN (25' HEIGHT), SEE DETAIL SHEET C5.2
- 3 INSTALL R1-1 "STOP" SIGN PER MUTCD STANDARDS, SEE DETAIL SHEET C5.1
- 4 INSTALL BOLLARD MOUNTED ADA PARKING SIGN, SEE DETAIL SHEET C5.1
- 5 PROPOSED CONCRETE BUILDING SIDEWALK (1.5% MAX. SLOPE)
- 6 PROPOSED CONCRETE SIDEWALK, SEE DETAIL SHEET C5.1
- 7 PROPOSED DECORATIVE CONCRETE SIDEWALK TREATMENT, SEE SHEET C4.1
- 8 PROPOSED 6" INTEGRAL CONCRETE CURB, SEE DETAIL SHEET C5.1
- 9 PROPOSED CONCRETE PAVEMENT, SEE SHEET C4.1
- 10 APPROXIMATE LOCATION OF KNOX BOX. REFER TO ARCHITECTURAL PLANS FOR DETAILS & SPECIFICATIONS
- 11 PROPOSED 4'-0" X 9'-0" CONCRETE PAD FOR AMPERSAND ART SCULPTURE, SEE DETAIL SHEET C5.2
- 12 PROPOSED GRAVEL SHOULDER AT EDGE OF PAVEMENT REMOVAL PER ODOT STANDARDS
- 13 PROPOSED ADA ACCESSIBLE ROUTE, SEE SHEET C4.3
- 14 PROPOSED LIFT VAN ACCESSIBLE PARKING SPACE
- 15 INSTALL BOLLARD BIKE RACK, SEE DETAIL SHEET C5.1
- 16 INSTALL BOLLARD (SPACED AT 5'-0" O.C.), TYPICAL, SEE DETAIL SHEET C5.4 & C5.5
- 17 INSTALL 8' HT. SOLID WOOD SCREEN FENCE, SEE DETAIL ON SHEET A1.4
- 18 PROPOSED UNDERGROUND STORAGE TANK LOCATIONS
- 19 PROPOSED AIR MACHINE, SEE SHEET C5.1
- 20 PROPOSED ICE MERCHANDISE
- 21 PROPOSED RED BOX(ES) VENDING MACHINE
- 22 PROPOSED MISCELLANEOUS MERCHANDISE
- 23 PROPOSED 11' x 11' PAD FOR PROPANE CAGE, PLACED PER NFPA 58 REQUIREMENTS
- 24 LIMITS OF PROPOSED PAVEMENT
- 25 LIMITS OF PAVEMENT REMOVAL
- 26 PROPOSED LIGHT POLE, SEE PHOTOMETRIC PLAN ON SHEET SE1.1. ALL BASES SHALL BE PLACED 48" FROM CENTER OF BASE TO BACK OF CURB OR SIDEWALK UNLESS OTHERWISE NOTED ON PLANS
- 27 PROPOSED 12' x 20' TRASH ENCLOSURE, SEE ARCHITECTURAL PLANS
- 28 FRONT ENTRY, SEE ARCHITECTURAL PLANS
- 29 PROPOSED 1' x 2' SOLID RED OVAL FOR KUM & GO ASSOCIATE PARKING
- 30 PROPOSED 12' x 60' LOADING ZONE, SEE SHEET C4.1
- 31 PROPOSED 2' x 2' DESIGNATED SMOKING AREA
- 32 PROPOSED TRANSFORMER PAD LOCATION, SEE SHEET C3.1
- 33 INSTALL ASPHALT PAVEMENT TAPER TO MATCH EXISTING SECTION
- 34 INSTALL ENTRANCE PAVEMENT MARKINGS, SEE DETAIL SHEET C5.2
- 35 PROPOSED MODULAR BLOCK RETAINING WALL
- 36 STRIPE FIRE LANE. SEE FIRE LANE NOTES ON THIS SHEET

LEGEND

- PROPOSED BOUNDARY
- SETBACK LINE
- EXISTING EASEMENT LINE
- LIMITS OF UNDERGROUND DETENTION SYSTEM
- PROPOSED INTEGRAL CONCRETE CURB
- ADA ACCESSIBLE ROUTE
- PROPOSED BUILDING
- PROPOSED DECORATIVE SIDEWALK TREATMENT
- PROPOSED BOLLARD
- PROPOSED SANITARY SEWER CLEANOUT
- PROPOSED SAMPLING MANHOLE
- PROPOSED GREASE INTERCEPTOR
- PROPOSED WATER METER
- PROPOSED IRRIGATION METER
- PROPOSED PUBLIC FIRE HYDRANT
- PROPOSED STORM SEWER CLEANOUT
- PROPOSED FLARED END SECTION
- PROPOSED STORM SEWER STRUCTURE
- PROPOSED UNDERGROUND DETENTION INSPECTION PORT
- PROPOSED STORM SEWER STRUCTURE
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED TRANSFORMER
- PARKING STALL COUNT PER BAY
- BENCHMARK
- EXIST. SIGN
- EXIST. MAILBOX
- EXIST. DECIDUOUS TREE
- EXIST. TELEPHONE PEDESTAL
- EXIST. GAS METER
- EXIST. GUY WIRE
- EXIST. POWER POLE
- EXIST. SANITARY SEWER LAMPHOLE
- EXIST. SANITARY SEWER MANHOLE
- EXIST. SEWER CLEANOUT
- EXIST. ROOF DRAIN
- EXIST. FIBER OPTIC POST
- EXIST. ELECTRIC PEDESTAL
- EXIST. TRANSFORMER
- EXIST. TRAFFIC SIGNAL MANHOLE
- EXIST. TRAFFIC SIGNAL WITH ARM
- EXIST. FIRE HYDRANT
- EXIST. WATER METER
- EXIST. WATER VALVE
- EXIST. EDGE OF ASPHALT
- EXIST. CONCRETE CURB
- EXIST. EDGE OF GRAVEL
- EXIST. CHAINLINK FENCE W/ BARBED WIRE
- EXIST. WOOD FENCE
- EXIST. CHAINLINK FENCE
- EXIST. SPLIT RAIL FENCE
- PROPOSED WOOD FENCE





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#837 - BROKEN ARROW, OK
24055 E. HIGHWAY 51

SITE PLAN

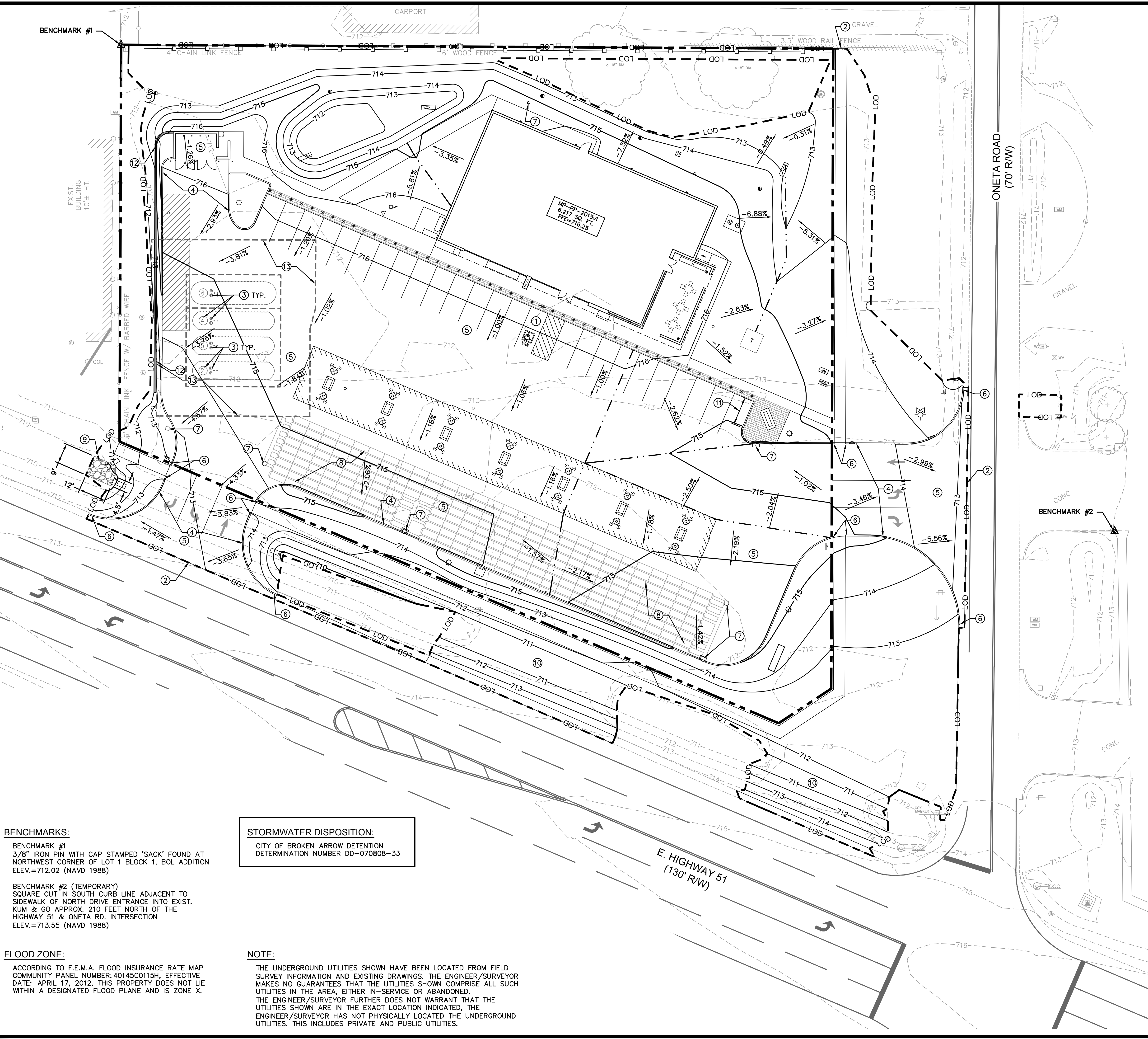
KG PROJECT TEAM:
RDR: JWH
SDM: NDH
CPM: SDN

DATE	REVISION DESCRIPTION	REVISIONS

DATE: 12-09-15

SHEET NUMBER:
C1.1
2 OF 13

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BENCHMARKS:
 BENCHMARK #1
 3/8" IRON PIN WITH CAP STAMPED 'SACK' FOUND AT NORTHWEST CORNER OF LOT 1 BLOCK 1, BOL ADDITION ELEV.=712.02 (NAVD 1988)
 BENCHMARK #2 (TEMPORARY)
 SQUARE CUT IN SOUTH CURB LINE ADJACENT TO SIDEWALK OF NORTH DRIVE ENTRANCE INTO EXIST. KUM & GO APPROX. 210 FEET NORTH OF THE HIGHWAY 51 & ONETA RD. INTERSECTION ELEV.=713.55 (NAVD 1988)

STORMWATER DISPOSITION:
 CITY OF BROKEN ARROW DETENTION DETERMINATION NUMBER DD-070808-33

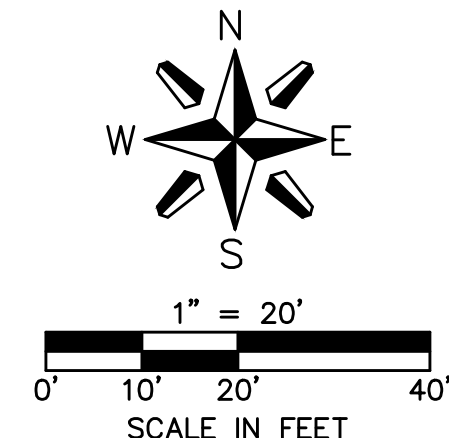
FLOOD ZONE:
 ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER: 40145C0115H, EFFECTIVE DATE: APRIL 17, 2012, THIS PROPERTY DOES NOT LIE WITHIN A DESIGNATED FLOOD PLANE AND IS ZONE X.


NOTE:
 THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER/SURVEYOR MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE ENGINEER/SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, THE ENGINEER/SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES.

- FLAG NOTES:**
- ① ADA ACCESSIBLE STALL, NOT TO EXCEED 1.75% GRADE IN ANY DIRECTION
 - ② MATCH EXISTING GRADE, CONTRACTOR SHALL FIELD VERIFY
 - ③ ALL LIDS FOR UNDERGROUND TANKS TO BE 1" ABOVE FINISHED GRADE
 - ④ PROPOSED CONCRETE INTEGRAL CURB
 - ⑤ PROPOSED CONCRETE PAVEMENT
 - ⑥ CONSTRUCT 2'-0" TRANSITION OF CURB TO PAVEMENT
 - ⑦ PROPOSED STORM SEWER STRUCTURE, SEE SHEET C2.2
 - ⑧ PROPOSED STORMTECH UNDERGROUND DETENTION SYSTEM, SEE SHEET C2.2
 - ⑨ CONSTRUCT RIP-RAP PAD, SEE DETAIL SHEET C5.4
 - ⑩ CONTRACTOR SHALL GRADE DITCH TO DRAIN @ 0.50% MIN.
 - ⑪ CONSTRUCT PAVEMENT TRANSITION TO CURB HEIGHT
 - ⑫ PROPOSED MODULAR BLOCK RETAINING WALL (30" MAX HEIGHT)
 - ⑬ TYPICAL UNDERGROUND STORAGE TANK OVERDIG LIMITS


LEGEND

	PROPOSED BOUNDARY
	PROPOSED EASEMENT LINE
	EXISTING EASEMENT LINE
	LIMITS OF UNDERGROUND DETENTION SYSTEM
	PROPOSED INTEGRAL CONCRETE CURB
	PROPOSED BUILDING
	LIMITS OF DISTURBANCE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	BREAK IN GRADE
	PROPOSED BOLLARD
	PROPOSED SANITARY SEWER CLEANOUT
	PROPOSED SAMPLING MANHOLE
	PROPOSED GREASE INTERCEPTOR
	PROPOSED WATER METER
	PROPOSED IRRIGATION METER
	PROPOSED PUBLIC FIRE HYDRANT
	PROPOSED STORM SEWER CLEANOUT
	PROPOSED FLARED END SECTION
	PROPOSED STORM SEWER STRUCTURE
	PROPOSED UNDERGROUND DETENTION INSPECTION PORT
	PROPOSED STORM SEWER STRUCTURE
	PROPOSED TELEPHONE PEDESTAL
	PROPOSED TRANSFORMER
	BENCHMARK
	EXIST. SIGN
	EXIST. MAILBOX
	EXIST. DECIDUOUS TREE
	EXIST. TELEPHONE PEDESTAL
	EXIST. GAS METER
	EXIST. GUY WIRE
	EXIST. POWER POLE
	EXIST. SANITARY SEWER LAMPHOLE
	EXIST. SANITARY SEWER MANHOLE
	EXIST. SEWER CLEANOUT
	EXIST. ROOF DRAIN
	EXIST. FIBER OPTIC POST
	EXIST. ELECTRIC PEDESTAL
	EXIST. TRANSFORMER
	EXIST. TRAFFIC SIGNAL MANHOLE
	EXIST. TRAFFIC SIGNAL WITH ARM
	EXIST. FIRE HYDRANT
	EXIST. WATER METER
	EXIST. WATER VALVE
	EXIST. EDGE OF ASPHALT
	EXIST. CONCRETE CURB
	EXIST. EDGE OF GRAVEL
	EXIST. CHAINLINK FENCE W/ BARBED WIRE
	EXIST. WOOD FENCE
	EXIST. CHAINLINK FENCE
	EXIST. SPLIT RAIL FENCE
	PROPOSED WOOD FENCE
	PROPOSED RIP-RAP





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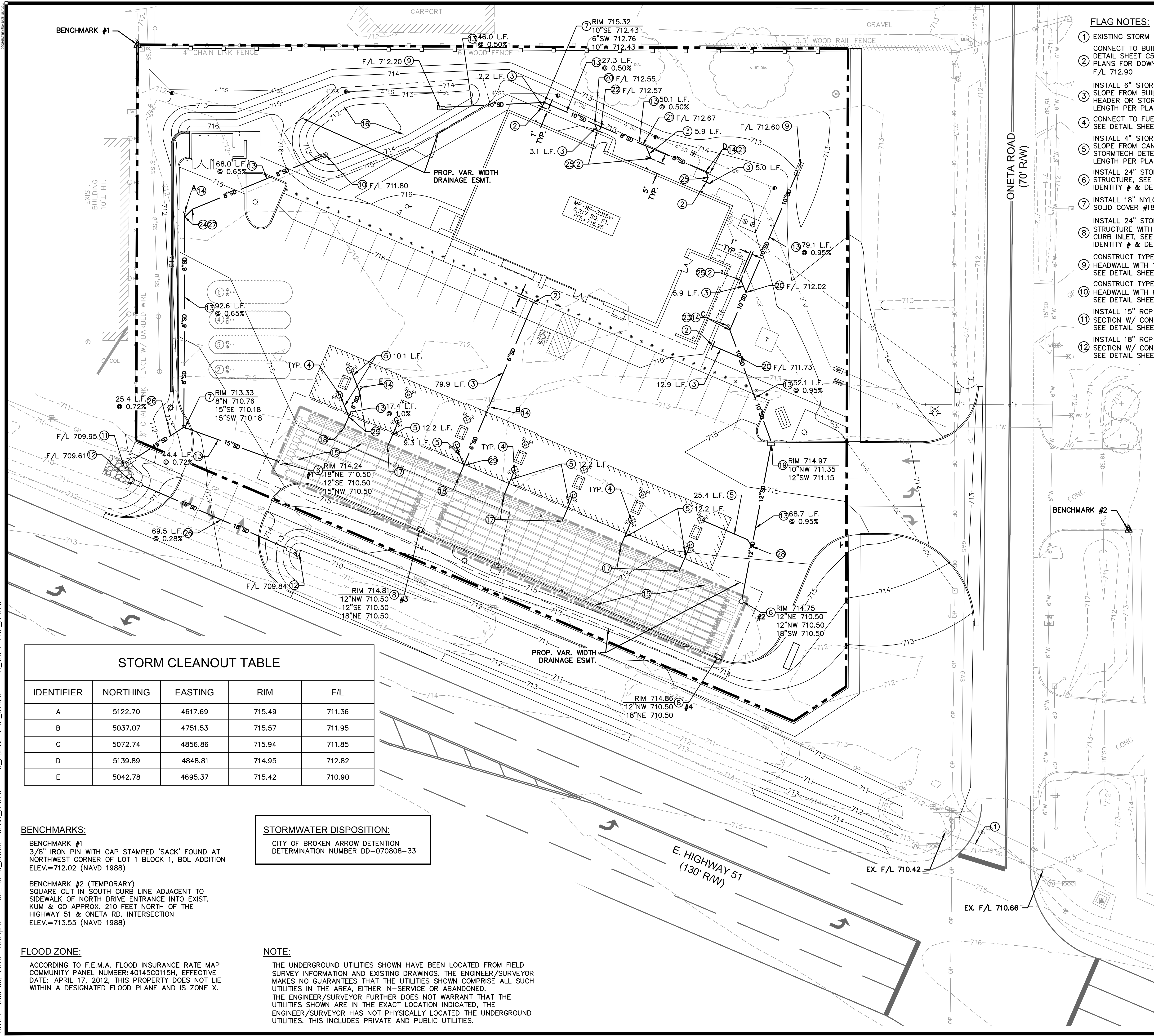


#837 - BROKEN ARROW, OK
 24055 E. HIGHWAY 51
 GRADING PLAN

REVISION DESCRIPTION	REVISIONS

DATE: 12-09-15

SHEET NUMBER: **C2.1**
 3 OF 13



FLAG NOTES:

- 1 EXISTING STORM SEWER PIPE; SIZE PER PLAN
- 2 CONNECT TO BUILDING DOWNSPOUT, SEE DETAIL SHEET C5.2 AND ARCHITECTURAL PLANS FOR DOWNSPOUT LOCATION. F/L 712.90
- 3 INSTALL 6" STORM SEWER PIPE @ 1.0% MIN. SLOPE FROM BUILDING DOWNSPOUT TO HEADER OR STORMTECH DETENTION SYSTEM; LENGTH PER PLAN
- 4 CONNECT TO FUEL CANOPY DOWNSPOUT, SEE DETAIL SHEET C5.2
- 5 INSTALL 4" STORM SEWER PIPE @ 1.0% MIN. SLOPE FROM CANOPY DOWNSPOUT TO STORMTECH DETENTION SYSTEM; LENGTH PER PLAN
- 6 INSTALL 24" STORMTECH CONNECTION STRUCTURE, SEE PLAN FOR STRUCTURE IDENTITY # & DETAIL SHEET C5.4
- 7 INSTALL 18" NYLOPLAST DRAIN BASIN WITH SOLID COVER #1899CGC
- 8 INSTALL 24" STORMTECH CONNECTION STRUCTURE WITH 2' X 3' DIAGONAL GRATE CURB INLET, SEE PLAN FOR STRUCTURE IDENTITY # & DETAIL SHEET C5.4
- 9 CONSTRUCT TYPE 1 CONCRETE HEADWALL WITH 12" MITERED DRAIN, SEE DETAIL SHEET C5.4
- 10 CONSTRUCT TYPE 2 CONCRETE HEADWALL WITH 8" MITERED DRAIN, SEE DETAIL SHEET C5.4
- 11 INSTALL 15" RCP FLARED END SECTION W/ CONCRETE TOEWALL, SEE DETAIL SHEET C5.4
- 12 INSTALL 18" RCP FLARED END SECTION W/ CONCRETE TOEWALL, SEE DETAIL SHEET C5.4
- 13 INSTALL STORM SEWER PIPE; SIZE, LENGTH & SLOPE PER PLAN
- 14 INSTALL STORM SEWER CLEANOUT; LETTER DESIGNATION ON PLAN FOR TABLE DESIGN INFORMATION. SEE DETAIL SHEET C5.2
- 15 INSTALL STORMTECH UNDERGROUND DETENTION SYSTEM WITH 8,000 C.F. OF STORAGE. SEE DETAIL SHEETS C5.3, C5.4 & C5.5
- 16 PROPOSED DRY DETENTION BASIN WITH 2,000 C.F. OF STORAGE
- 17 INSTALL 4" INSERTA-TEE FOR STORMTECH CHAMBER CONNECTION. F/L = 710.73
- 18 INSTALL 6" INSERTA-TEE FOR STORMTECH CHAMBER CONNECTION. F/L = 710.73
- 19 INSTALL 18" NYLOPLAST DRAIN BASIN WITH 2' X 3' DIAGONAL GRATE CURB INLET, SEE DETAIL SHEET C5.4
- 20 INSTALL 10" X 6" REDUCING WYE
- 21 INSTALL 8" X 6" REDUCING WYE
- 22 INSTALL 10" X 8" REDUCER
- 23 INSTALL 10" WYE
- 24 INSTALL 8" WYE
- 25 INSTALL 6" 45° BEND
- 26 INSTALL CMP STORM SEWER PIPE; SIZE, LENGTH & SLOPE PER PLAN
- 27 INSTALL 8" 22.5° BEND
- 28 INSTALL 12" X 4" REDUCING WYE
- 29 INSTALL 6" X 4" REDUCING WYE

LEGEND

	PROPOSED BOUNDARY
	PROPOSED EASEMENT LINE
	EXISTING EASEMENT LINE
	LIMITS OF UNDERGROUND DETENTION SYSTEM
	PROPOSED INTEGRAL CONCRETE CURB
	PROPOSED BUILDING
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED BOLLARD
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	EXIST. SANITARY SEWER MANHOLE
	EXIST. SEWER CLEANOUT
	EXIST. ROOF DRAIN
	EXIST. FIBER OPTIC POST
	EXIST. ELECTRIC PEDESTAL
	EXIST. TRANSFORMER
	EXIST. TRAFFIC SIGNAL MANHOLE
	EXIST. TRAFFIC SIGNAL WITH ARM
	EXIST. FIRE HYDRANT
	EXIST. WATER METER
	EXIST. WATER VALVE
	EXIST. EDGE OF ASPHALT
	EXIST. CONCRETE CURB
	EXIST. EDGE OF GRAVEL
	EXIST. CHAINLINK FENCE W/ BARBED WIRE
	EXIST. WOOD FENCE
	EXIST. CHAINLINK FENCE
	EXIST. SPLIT RAIL FENCE
	PROPOSED WOOD FENCE
	STORM PIPE
	PROPOSED STORM PIPE
	PROPOSED RIP-RAP

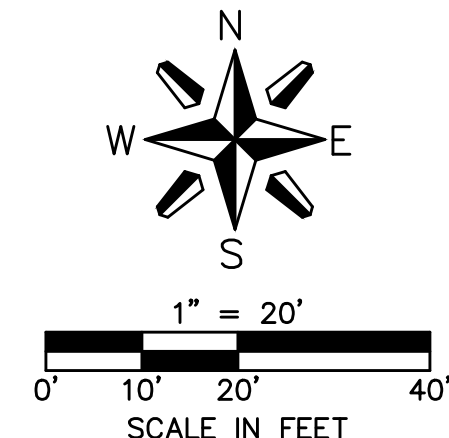
IDENTIFIER	NORTHING	EASTING	RIM	F/L
A	5122.70	4617.69	715.49	711.36
B	5037.07	4751.53	715.57	711.95
C	5072.74	4856.86	715.94	711.85
D	5139.89	4848.81	714.95	712.82
E	5042.78	4695.37	715.42	710.90

BENCHMARKS:
 BENCHMARK #1
 3/8" IRON PIN WITH CAP STAMPED 'SACK' FOUND AT NORTHWEST CORNER OF LOT 1 BLOCK 1, BOL ADDITION ELEV.=712.02 (NAVD 1988)
 BENCHMARK #2 (TEMPORARY)
 SQUARE CUT IN SOUTH CURB LINE ADJACENT TO SIDEWALK OF NORTH DRIVE ENTRANCE INTO EXIST. KUM & GO APPROX. 210 FEET NORTH OF THE HIGHWAY 51 & ONETA RD. INTERSECTION ELEV.=713.55 (NAVD 1988)

STORMWATER DISPOSITION:
 CITY OF BROKEN ARROW DETENTION DETERMINATION NUMBER DD-070808-33

FLOOD ZONE:
 ACCORDING TO F.E.M.A. FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER: 40145C0115H, EFFECTIVE DATE: APRIL 17, 2012, THIS PROPERTY DOES NOT LIE WITHIN A DESIGNATED FLOOD PLANE AND IS ZONE X.

NOTE:
 THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER/SURVEYOR MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE ENGINEER/SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, THE ENGINEER/SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES.



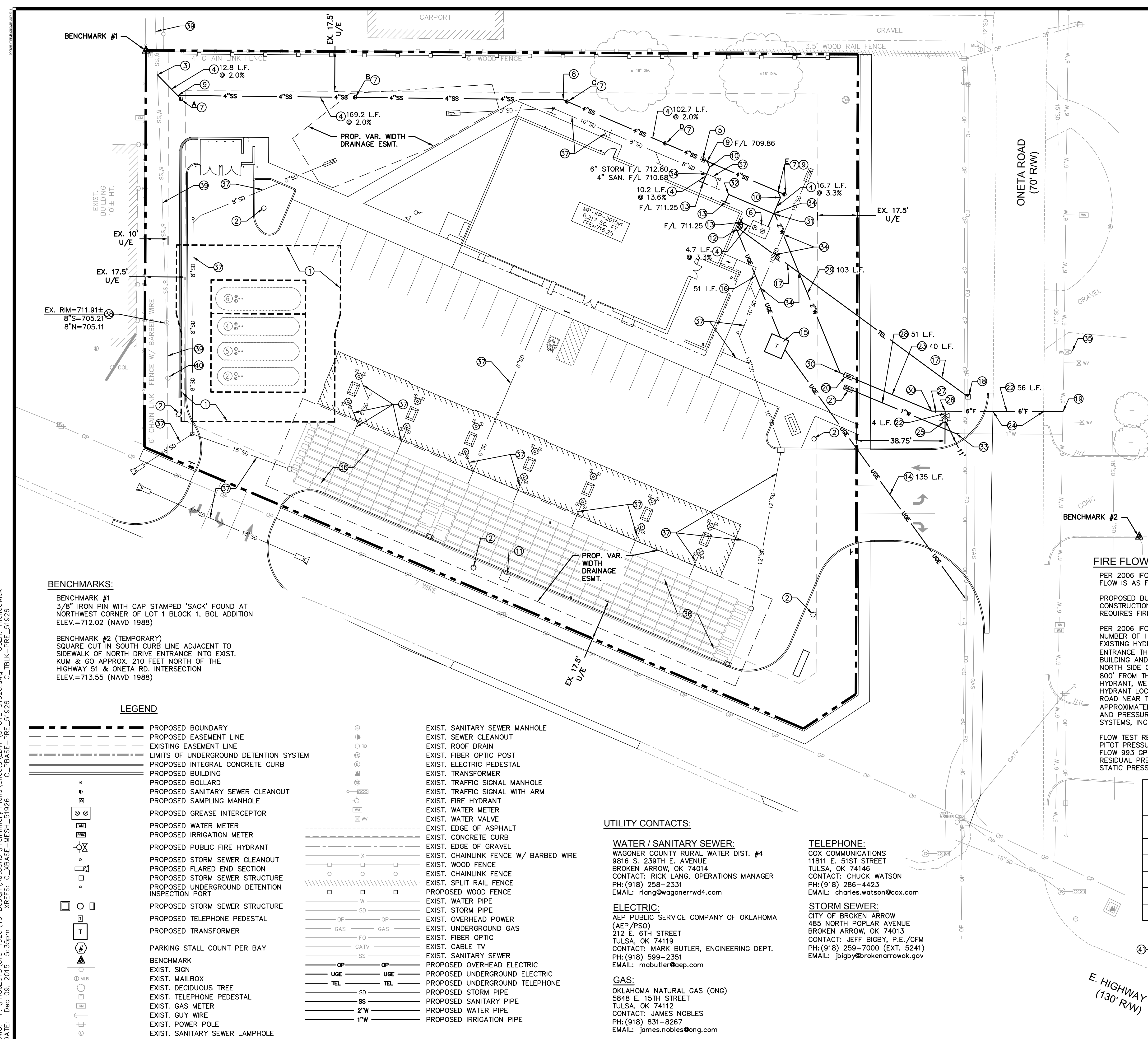
6400 Westown Parkway
 West Des Moines, Iowa
 50266
 P: 515-226-0128
 F: 515-223-9873

#837 - BROKEN ARROW, OK
 24055 E. HIGHWAY 51
DRAINAGE PLAN

KG PROJECT TEAM:
 RDR: JWH
 SDM: NDH
 CPM: SDN

REVISION DESCRIPTION	DATE

DATE: 12-09-15
 SHEET NUMBER: C2.2
 4 OF 13



- FLAG NOTES:**
- TYPICAL UNDERGROUND STORAGE TANK OVERDIG LIMITS
 - PROPOSED LIGHT POLE. SEE MEP PLANS FOR SITE LIGHTING ELECTRICAL, FOOTING DETAILS AND SHEETS C4.1 & C4.2 FOR POLE LOCATIONS
 - INSTALL 6" INSERTA-WYE FOR CONNECTION TO EXISTING 8" PVC MAIN EX. 8" F/L = 704.68± PROP. 4" F/L = 704.85
 - INSTALL 4" SANITARY SERVICE PER CITY & SEWER DISTRICT REQUIREMENTS; LENGTH AND SLOPE PER PLAN
 - INSTALL SAMPLING PORT, SEE DETAIL SHEET C5.2
 - INSTALL 1,000 GALLON GREASE INTERCEPTOR, SEE DETAIL SHEET C5.2 F/L IN/OUT = 711.09
 - INSTALL SANITARY SEWER CLEANOUT; LETTER DESIGNATION ON PLAN FOR TABLE DESIGN INFORMATION. SEE DETAIL SHEET C5.2
 - INSTALL 4" PVC 22.5' BEND
 - INSTALL 4" PVC WYE
 - INSTALL 4" PVC 45' BEND
 - INSTALL AIR MACHINE, SEE DETAIL SHEET C5.1
 - ELECTRICAL AND TELEPHONE BUILDING CONNECTION, COORDINATE ROUTE WITH APPROPRIATE UTILITY PROVIDER
 - CONNECT TO BUILDING SERVICE, CONTRACTOR SHALL VERIFY LOCATION WITH MEP PLANS
 - INSTALL PRIMARY UNDERGROUND ELECTRICAL SERVICE, COORDINATE WITH AEP/PSO; LENGTH PER PLAN
 - CONSTRUCT TRANSFORMER PAD, COORDINATE WITH AEP/PSO FOR PAD REQUIREMENTS AND TRANSFORMER INSTALLATION
 - INSTALL SECONDARY UNDERGROUND ELECTRICAL SERVICE, COORDINATE WITH AEP/PSO; LENGTH PER PLAN
 - INSTALL 3" CONDUIT W/ PULL STRINGS FOR UNDERGROUND TELEPHONE SERVICE. COORDINATE WITH COX COMM. FOR FINAL ROUTING
 - PEDESTAL FOR UNDERGROUND TELEPHONE SERVICE INSTALLED BY COX COMM.
 - NEW 6" TAP OF EXISTING 6" MAIN FOR DOMESTIC & FIRE HYDRANT SERVICE PROVIDED AND INSTALLED BY RURAL WATER DIST. #4
 - NEW 2" WATER METER PROVIDED AND INSTALLED BY RURAL WATER DIST. #4
 - SALVAGED 1" WATER METER TO BE REINSTALLED BY RURAL WATER DIST. #4
 - 6" C900 PVC WATER SERVICE W/ 36" MIN. COVER. SERVICE LINE PROVIDED & INSTALLED BY RURAL WATER DIST. #4; LENGTH PER PLAN
 - 2" COPPER TYPE K WATER SERVICE W/ 36" MIN. COVER. SERVICE LINE PROVIDED & INSTALLED BY RURAL WATER DIST. #4; LENGTH PER PLAN
 - CONTRACTOR SHALL BORE UNDER ONETA RD. FOR INSTALLATION OF 6" WATER LINE PER RURAL WATER DIST. #4 STANDARDS
 - FIRE HYDRANT ASSEMBLY PROVIDED & INSTALLED BY RURAL WATER DIST. #4
 - INSTALL 6" TEE M.J. W/ T.B.
 - INSTALL 6" x 2" REDUCER
 - 1" IRRIGATION SERVICE EXTENDED TO SALVAGED WATER METER W/ 36" MIN. COVER. SERVICE LINE PROVIDED & INSTALLED BY RURAL WATER DIST. #4; LENGTH PER PLAN
 - INSTALL 2" COPPER TYPE K WATER SERVICE W/ 36" MIN. COVER; LENGTH PER PLAN
 - INSTALL 2" 22.5' BEND
 - INSTALL 2" 45' BEND
 - INSTALL 2" 90' BEND
 - INSTALL 1" 22.5' BEND
 - UTILITY CROSSING, CONTRACTOR SHALL MAINTAIN A MIN. OF 24" VERTICAL CLEARANCE BETWEEN UTILITIES UNLESS NOTED OTHERWISE
 - EXISTING FIRE HYDRANT
 - PROPOSED STORMTECH UNDERGROUND DETENTION SYSTEM, SEE DRAINAGE PLAN ON SHEET C2.2
 - PROPOSED STORM SEWER, TYPICAL. SEE DRAINAGE PLAN ON SHEET C2.2
 - PROTECT EXISTING SANITARY SEWER MANHOLE
 - PROTECT EXISTING 8" SANITARY SEWER MAIN
 - PROTECT EXISTING SANITARY SEWER LAMPHOLE
 - EXISTING FIRE HYDRANT APPROX. 400' EAST OF INTERSECTION

BENCHMARKS:

BENCHMARK #1
3/8" IRON PIN WITH CAP STAMPED 'SACK' FOUND AT NORTHWEST CORNER OF LOT 1 BLOCK 1, BOL ADDITION ELEV.=712.02 (NAVD 1988)

BENCHMARK #2 (TEMPORARY)
SQUARE CUT IN SOUTH CURB LINE ADJACENT TO SIDEWALK OF NORTH DRIVE ENTRANCE INTO EXIST. KUM & GO APPROX. 210 FEET NORTH OF THE HIGHWAY 51 & ONETA RD. INTERSECTION ELEV.=713.55 (NAVD 1988)

FIRE FLOW CALCULATIONS:

PER 2006 IFC SECTION B105, THE REQUIRED FIRE FLOW IS AS FOLLOWS:

PROPOSED BUILDING 6,321 SF. TYPE V-B CONSTRUCTION NON-SPRINKLED. REQUIRES FIRE-FLOW OF 2,000 GPM

PER 2006 IFC SECTIONS C103, C104 AND C105, THE NUMBER OF HYDRANTS REQUIRED IS 2. THERE IS AN EXISTING HYDRANT ACROSS ONETA ROAD AT THE SITE ENTRANCE THAT IS APPROXIMATELY 220' FROM THE BUILDING AND A HYDRANT EAST OF THE SITE ON THE NORTH SIDE OF HIGHWAY 51 THAT IS APPROXIMATELY 800' FROM THE BUILDING. IN ADDITION OF THESE TWO HYDRANT, WE ARE PROPOSING AN ADDITIONAL HYDRANT LOCATED ON THE WEST SIDE OF ONETA ROAD NEAR THE PROPERTY ENTRANCE THAT IS APPROXIMATELY 150' FROM THE BUILDING. FLOW TEST AND PRESSURE READINGS WERE COMPLETED BY MAC SYSTEMS, INC. ON OCTOBER 12, 2015.

FLOW TEST RESULTS:
PITOT PRESSURE 35 PSI
FLOW 993 GPM
RESIDUAL PRESSURE 60 PSI
STATIC PRESSURE 80 PSI

CALCULATED FLOW:
 $QR = QF \times (HR^{0.54}) / (HF^{0.54})$

QR = FLOW AVAILABLE AT DESIRED RESIDUAL PRESSURE (DESIRED RESIDUAL PRESSURE = 20 PSI)
QF = FLOW OBTAINED DURING FLOW TEST
HR = PRESSURE DROP TO THE DESIRED RESIDUAL PRESSURE
HF = PRESSURE DROP DURING THE TEST

$QR = 993 \text{ GPM} \times [(60\text{PSI} - 20 \text{PSI})^{0.54}] / [80 \text{PSI} - 60 \text{PSI})^{0.54}]$

QR = 1439 GPM

WITH THE EXISTING FLOW, FRICTION AND FITTING LOSSES, FLOWS AT EXISTING HYDRANTS WILL BE LESS THAN THE MINIMUM OF 2000 GPM AS REQUIRED IN SECTION B105 OF THE 2006 IFC.

LEGEND

- PROPOSED BOUNDARY
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- LIMITS OF UNDERGROUND DETENTION SYSTEM
- PROPOSED INTEGRAL CONCRETE CURB
- PROPOSED BUILDING
- PROPOSED BOLLARD
- PROPOSED SANITARY SEWER CLEANOUT
- PROPOSED SAMPLING MANHOLE
- PROPOSED GREASE INTERCEPTOR
- PROPOSED WATER METER
- PROPOSED IRRIGATION METER
- PROPOSED PUBLIC FIRE HYDRANT
- PROPOSED STORM SEWER CLEANOUT
- PROPOSED FLARED END SECTION
- PROPOSED STORM SEWER STRUCTURE
- PROPOSED UNDERGROUND DETENTION INSPECTION PORT
- PROPOSED STORM SEWER STRUCTURE
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED TRANSFORMER
- PARKING STALL COUNT PER BAY
- BENCHMARK
- EXIST. SIGN
- EXIST. MAILBOX
- EXIST. DECIDUOUS TREE
- EXIST. TELEPHONE PEDESTAL
- EXIST. GAS METER
- EXIST. GUY WIRE
- EXIST. POWER POLE
- EXIST. SANITARY SEWER LAMPHOLE
- EXIST. SANITARY SEWER MANHOLE
- EXIST. SEWER CLEANOUT
- EXIST. ROOF DRAIN
- EXIST. FIBER OPTIC POST
- EXIST. ELECTRIC PEDESTAL
- EXIST. TRANSFORMER
- EXIST. TRAFFIC SIGNAL MANHOLE
- EXIST. TRAFFIC SIGNAL WITH ARM
- EXIST. FIRE HYDRANT
- EXIST. WATER METER
- EXIST. WATER VALVE
- EXIST. EDGE OF ASPHALT
- EXIST. CONCRETE CURB
- EXIST. EDGE OF GRAVEL
- EXIST. CHAINLINK FENCE W/ BARBED WIRE
- EXIST. WOOD FENCE
- EXIST. CHAINLINK FENCE
- EXIST. SPLIT RAIL FENCE
- PROPOSED WOOD FENCE
- EXIST. WATER PIPE
- EXIST. STORM PIPE
- EXIST. OVERHEAD POWER
- EXIST. UNDERGROUND GAS
- EXIST. FIBER OPTIC
- EXIST. CABLE TV
- EXIST. SANITARY SEWER
- PROPOSED OVERHEAD ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND TELEPHONE
- PROPOSED STORM PIPE
- PROPOSED SANITARY PIPE
- PROPOSED WATER PIPE
- PROPOSED IRRIGATION PIPE

UTILITY CONTACTS:

WATER / SANITARY SEWER:
WAGONER COUNTY RURAL WATER DIST. #4
9816 S. 239TH E. AVENUE
BROKEN ARROW, OK 74014
CONTACT: RICK LANG, OPERATIONS MANAGER
PH: (918) 258-2331
EMAIL: rlang@wagonerrwd4.com

ELECTRIC:
AEP PUBLIC SERVICE COMPANY OF OKLAHOMA (AEP/PSO)
212 E. 6TH STREET
TULSA, OK 74119
CONTACT: MARK BUTLER, ENGINEERING DEPT.
PH: (918) 599-2351
EMAIL: mabutler@aep.com

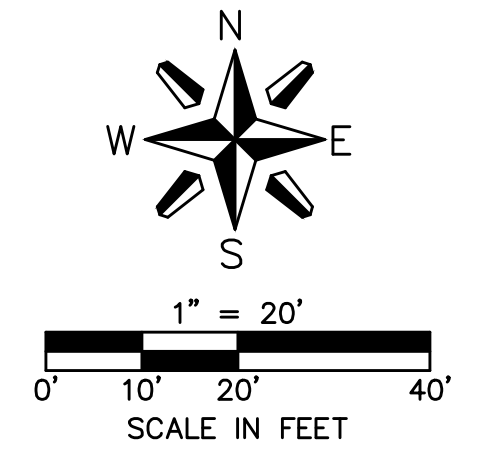
GAS:
OKLAHOMA NATURAL GAS (ONG)
5848 E. 15TH STREET
TULSA, OK 74112
CONTACT: JAMES NOBLES
PH: (918) 831-8267
EMAIL: james.nobles@ong.com

TELEPHONE:
COX COMMUNICATIONS
11811 E. 51ST STREET
TULSA, OK 74146
CONTACT: CHUCK WATSON
PH: (918) 286-4423
EMAIL: charles.watson@cox.com

STORM SEWER:
CITY OF BROKEN ARROW
485 NORTH POPLAR AVENUE
BROKEN ARROW, OK 74013
CONTACT: JEFF BIGBY, P.E./CFM
PH: (918) 259-7000 (EXT. 5241)
EMAIL: jbigby@brokenarrowok.gov

SANITARY CLEANOUT TABLE

IDENTIFIER	NORTHING	EASTING	RIM	F/L
A	5175.29	4612.29	712.00	705.11
B	5175.86	4688.75	714.14	706.67
C	5174.07	4781.94	714.66	708.49
D	5155.68	4824.98	714.19	709.47
E	5133.30	4877.37	714.24	710.54



OLSSON ASSOCIATES
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FAX: 477-8900
www.olssonassociates.com

Kum & Go

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F: 515-223-9873

#837 - BROKEN ARROW, OK
24055 E. HIGHWAY 51

UTILITY PLAN

KG PROJECT TEAM:
RDR: JWH
SDM: NDH
CPM: SDN

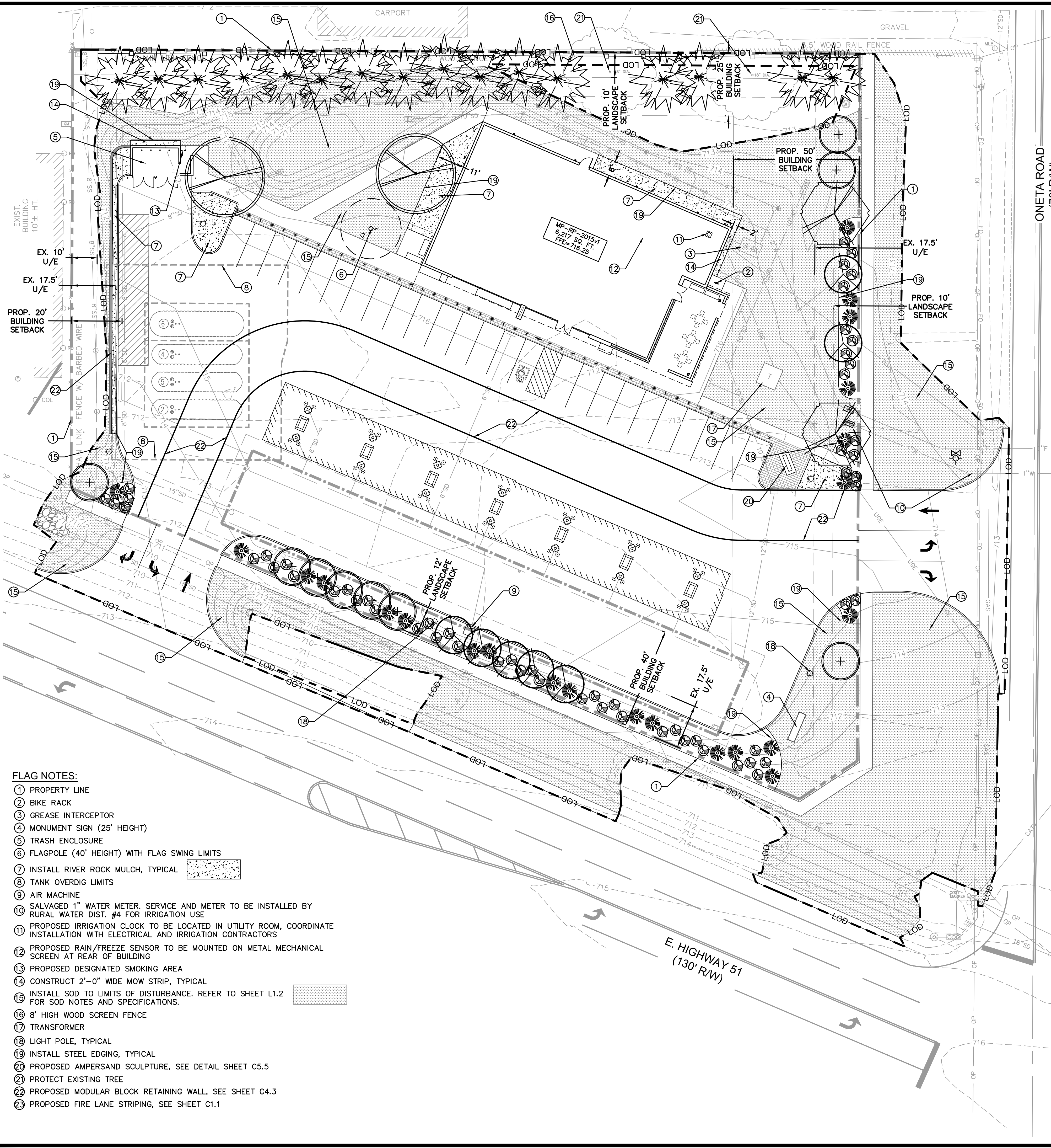
REVISIONS

DATE: 12-09-15

SHEET NUMBER:
C3.1
5 OF 13

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 DATE: Dec 09, 2015 5:35pm
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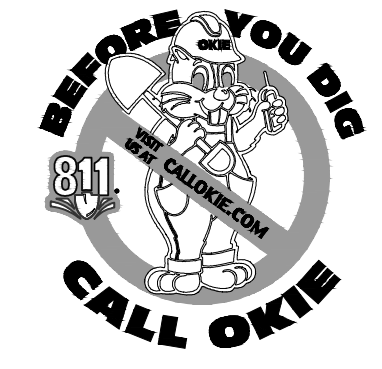
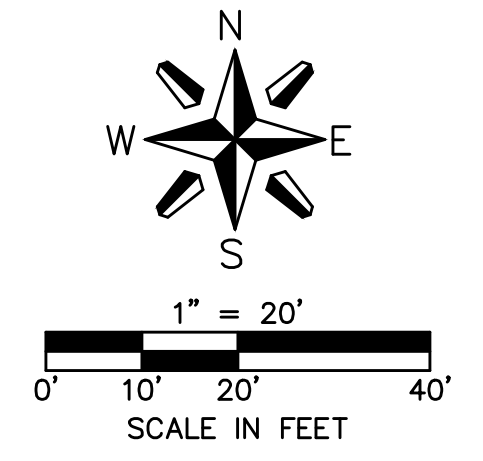
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- FLAG NOTES:**
- 1 PROPERTY LINE
 - 2 BIKE RACK
 - 3 GREASE INTERCEPTOR
 - 4 MONUMENT SIGN (25' HEIGHT)
 - 5 TRASH ENCLOSURE
 - 6 FLAGPOLE (40' HEIGHT) WITH FLAG SWING LIMITS
 - 7 INSTALL RIVER ROCK MULCH, TYPICAL
 - 8 TANK OVERDIG LIMITS
 - 9 AIR MACHINE
 - 10 SALVAGED 1" WATER METER. SERVICE AND METER TO BE INSTALLED BY RURAL WATER DIST. #4 FOR IRRIGATION USE
 - 11 PROPOSED IRRIGATION CLOCK TO BE LOCATED IN UTILITY ROOM, COORDINATE INSTALLATION WITH ELECTRICAL AND IRRIGATION CONTRACTORS
 - 12 PROPOSED RAIN/FREEZE SENSOR TO BE MOUNTED ON METAL MECHANICAL SCREEN AT REAR OF BUILDING
 - 13 PROPOSED DESIGNATED SMOKING AREA
 - 14 CONSTRUCT 2'-0" WIDE MOW STRIP, TYPICAL
 - 15 INSTALL SOD TO LIMITS OF DISTURBANCE. REFER TO SHEET L1.2 FOR SOD NOTES AND SPECIFICATIONS.
 - 16 8' HIGH WOOD SCREEN FENCE
 - 17 TRANSFORMER
 - 18 LIGHT POLE, TYPICAL
 - 19 INSTALL STEEL EDGING, TYPICAL
 - 20 PROPOSED AMPERSAND SCULPTURE, SEE DETAIL SHEET C5.5
 - 21 PROTECT EXISTING TREE
 - 22 PROPOSED MODULAR BLOCK RETAINING WALL, SEE SHEET C4.3
 - 23 PROPOSED FIRE LANE STRIPING, SEE SHEET C1.1


PLANT LIST					
QTY.	SYMBOL	COMMON/SCIENTIFIC NAME	PLANTING SIZE	MATURE WIDTH	MATURE HEIGHT
SHADE TREES					
2		OCTOBER GLORY RED MAPLE ACER RUBRUM 'OCTOBER GLORY'	2" CAL. B&B	25'-30'	40'-50'
2		SAWTOOTH OAK QUERCUS ACUTISSIMA	2" CAL. B&B	30'-40'	40'-50'
EVERGREEN TREES					
16		CEDRUS ATLANTICA ATLAS CEDAR	5'-6" HIGH	35'-45'	50'-70'
UNDERSTORY TREES					
9		DOWNY SERVICEBERRY AMELANCHIER ARBOREA	2" CAL.	15'-20'	20'-25'
7		EASTERN REDBUD CERCIS CANADENSIS	2" CAL.	20'-25'	20'-25'
EVERGREEN SHRUBS					
58		DWARF SACRED BAMBOO NANDINA DOMESTICA 'NANA PURPUREA'	3 GAL.	1'-2'	1'-2'
23		SEA GREEN JUNIPER JUNIPERUS CHINENSIS 'SEA GREEN'	3 GAL.	6'-8'	4'-6'

- LEGEND**
- PROPOSED BOUNDARY
 - PROPOSED EASEMENT LINE
 - EXISTING EASEMENT LINE
 - PROPOSED INTEGRAL CONCRETE CURB
 - PROPOSED BUILDING
 - LIMITS OF DISTURBANCE
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - PROPOSED DECORATIVE SIDEWALK TREATMENT
 - PROPOSED BOLLARD
 - PROPOSED SANITARY SEWER CLEANOUT
 - PROPOSED SAMPLING MANHOLE
 - PROPOSED GREASE INTERCEPTOR
 - PROPOSED WATER METER
 - PROPOSED IRRIGATION METER
 - PROPOSED STORM SEWER CLEANOUT
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 - WATER PIPE
 - SANITARY PIPE
 - STORM PIPE
 - OVERHEAD POWER
 - TELEPHONE
 - UNDERGROUND GAS
 - OVERHEAD CABLE
 - UNDERGROUND ELECTRIC





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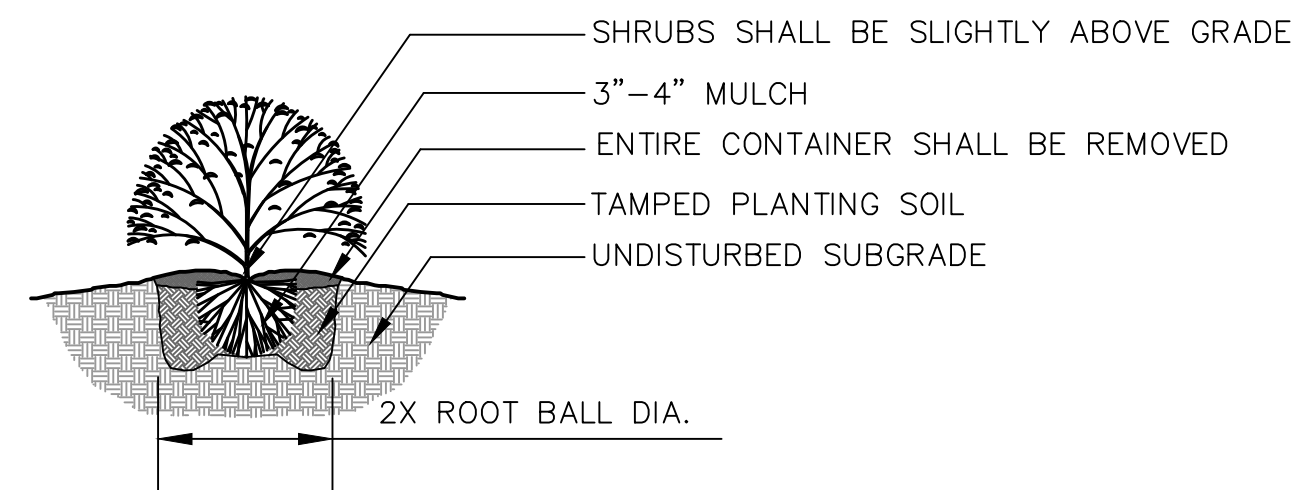
#837 - BROKEN ARROW, OK
 24055 E. HIGHWAY 51
 LANDSCAPE PLAN

KG PROJECT TEAM:
 RDR: JWH
 SDM: NDH
 CPM: SDN

REVISION DESCRIPTION	DATE

DATE: 12-09-15

SHEET NUMBER:
L1.1
 6 OF 13



- NOTES:
1. MINIMUM ROOT SPREAD TO BE IN ACCORDANCE WITH ANLA STANDARDS.
 2. PRUNE DAMAGED LIMBS OR ROOTS AFTER INSTALLATION.
 3. MAKE SURE ROOTS DO NOT DRY OUT DURING INSTALLATION.
 4. SOAK GENEROUSLY TO COMPACT AND SETTLE.

1 SHRUB PLANTING DETAIL
NOT TO SCALE

LANDSCAPE CALCULATIONS

PROPERTY IS ZONED CN (COMMERCIAL NEIGHBORHOOD)
ADJACENT PROPERTY ZONING
NORTH - AGRICULTURE/RESIDENTIAL IN COUNTY (RESIDENTIAL)
EAST - A-1 AND CH ACROSS RIGHT-OF-WAY (CONVENIENCE STORE)
SOUTH - COMMERCIAL IN COUNTY ACROSS RIGHT-OF-WAY (AUTO AND MISCELLANEOUS SALES)
WEST - A-1 (STORAGE AND BUSINESS)

LOT AREAS

IMPERVIOUS AREA	=	45,916 SQ.FT.
PERVIOUS AREA	=	28,831 SQ.FT.
TOTAL LOT AREA	=	74,747 SQ.FT.
TOTAL OPEN SPACE REQUIRED	=	10.0% (AS A PUD)
TOTAL OPEN SPACE PROVIDED	=	38.6%

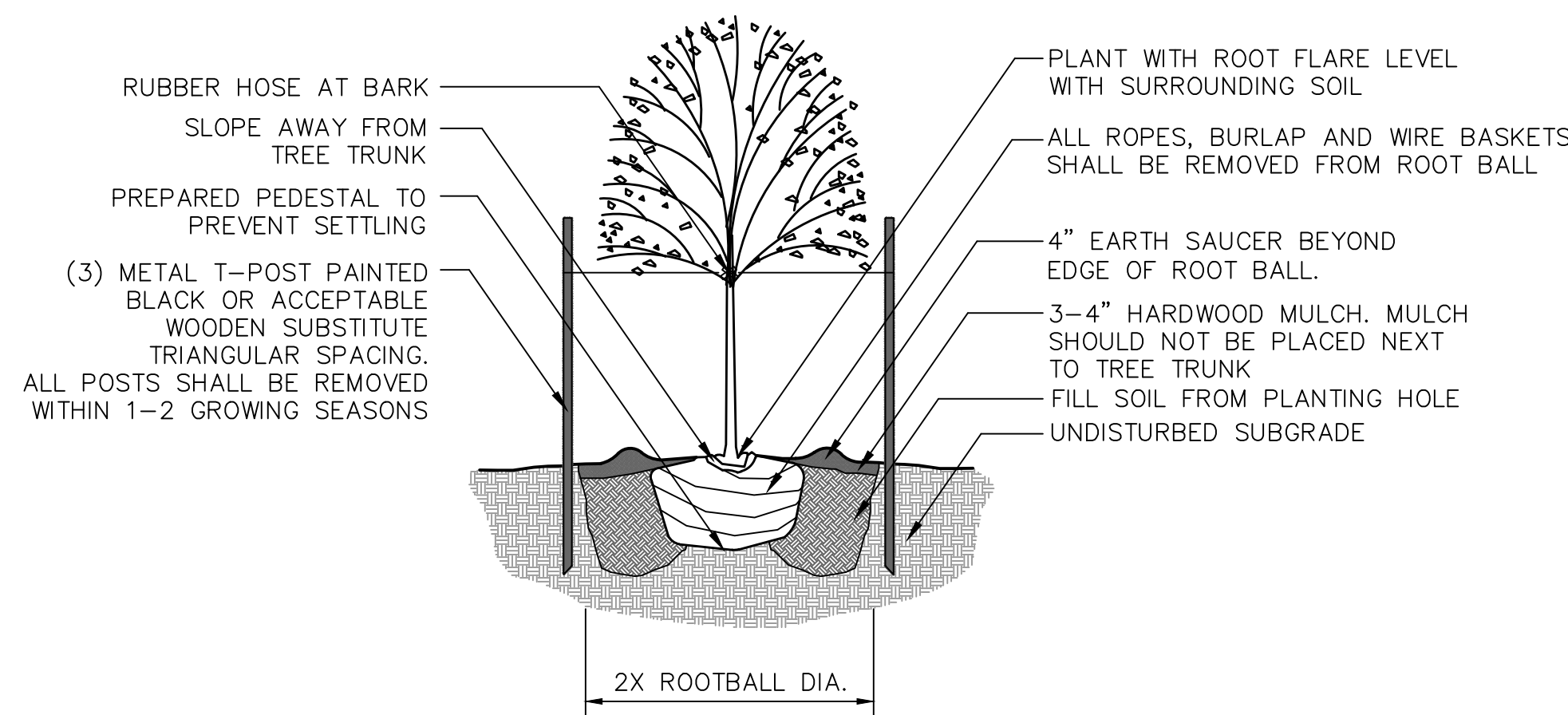
INTERIOR LANDSCAPE

TOTAL NEW PARKING STALLS	=	25
25 PARKING STALLS REQUIRES	=	2 TREES A MINIMUM OF 2" CALIPER
(1 TREE PER 15 PARKING STALLS. TREES SHALL BE ON THE CITY'S APPROVED TREE LIST)		
LANDSCAPE PLANTING PROVIDED	=	2 TREES WITH 2" CALIPER

LANDSCAPE EDGE - NORTH
PERIMETER GREEN 10' WIDE (1 MEDIUM/LARGE EVERGREEN TREE PER 20' PLUS 8' HIGH OPAQUE FENCE)
313 L.F. OF ADJACENT PROPERTY FRONTAGE FRONTAGE
LANDSCAPE REQUIRED = 16 MEDIUM/LARGE EVERGREEN TREES AND AN 8' HIGH OPAQUE FENCE
LANDSCAPE PROVIDED = 16 MEDIUM/LARGE EVERGREEN TREES AND AN 8' HIGH OPAQUE FENCE

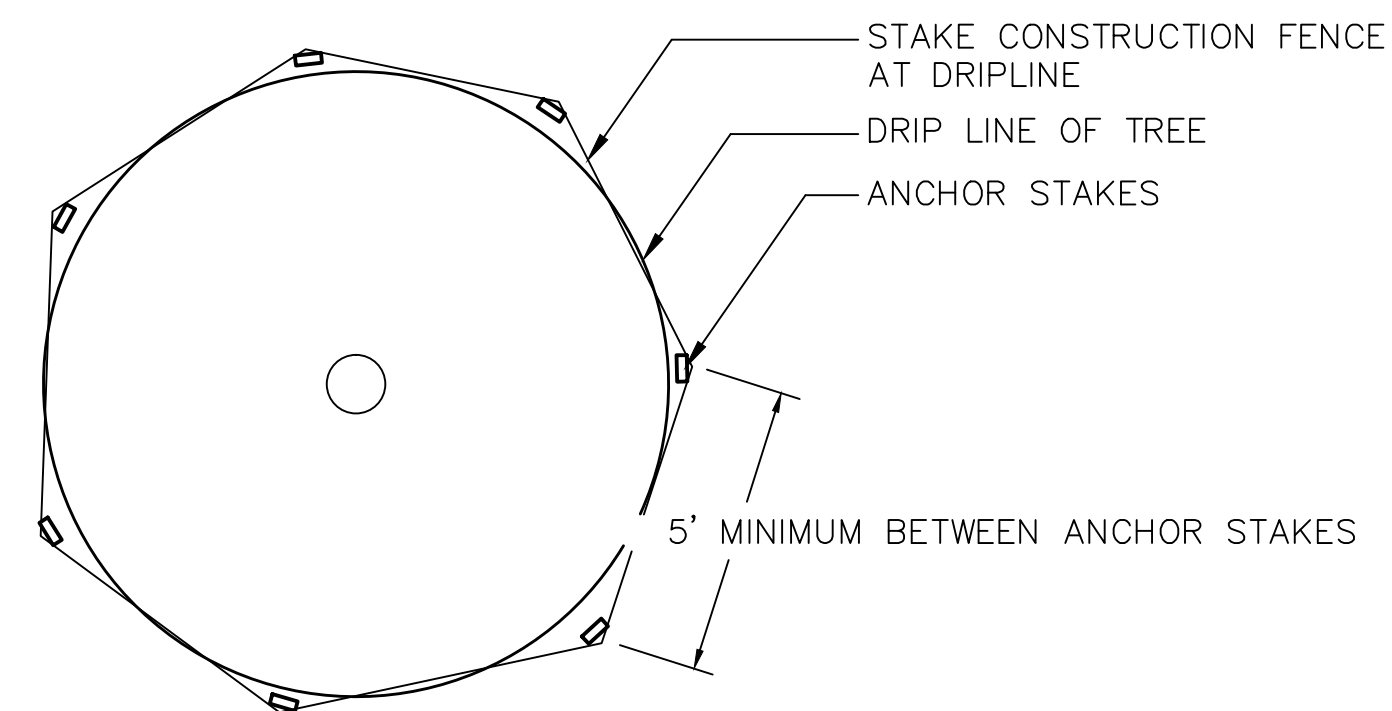
LANDSCAPE EDGE - EAST
LANDSCAPE EDGE REQUIRED 10' WIDE (1 TREE OF A 2" CALIPER PER 50' PER CITY'S TREE LIST OR 1 TREE OF A 2" CALIPER AND 10 SHRUBS OF A 3 GALLON PER 50' PER CITY'S TREE LIST IF PARKING LOTS AND DRIVES ABUT THE LANDSCAPE EDGE AND THE LANDSCAPE EDGE IS LESS THAN 30' WIDE)
183 L.F. FRONTAGE WITHOUT ABUTTING PARKING AND DRIVES
126 L.F. FRONTAGE WITH ABUTTING PARKING AND DRIVES
LANDSCAPE REQUIRED = 7 TREES WITH 2" CALIPER AND 25 SHRUBS OF 3 GALLON
LANDSCAPE PROVIDED = 7 TREES WITH 2" CALIPER AND 25 SHRUBS OF 3 GALLON

LANDSCAPE EDGE - SOUTH
LANDSCAPE EDGE REQUIRED 12' WIDE (1 TREE OF A 2" CALIPER PER 30' PER CITY'S TREE LIST OR 1 TREE OF A 2" CALIPER PER 30' AND 10 SHRUBS OF A 3 GALLON PER 50' PER CITY'S TREE LIST IF PARKING LOTS AND DRIVES ABUT THE LANDSCAPE EDGE AND THE LANDSCAPE EDGE IS LESS THAN 30' WIDE)
37 L.F. FRONTAGE WITHOUT ABUTTING PARKING AND DRIVES
278 L.F. FRONTAGE WITH ABUTTING PARKING AND DRIVES
LANDSCAPE REQUIRED = 11 TREES WITH 2" CALIPER AND 56 SHRUBS OF 3 GALLON
LANDSCAPE PROVIDED = 11 TREES WITH 2" CALIPER AND 56 SHRUBS OF 3 GALLON

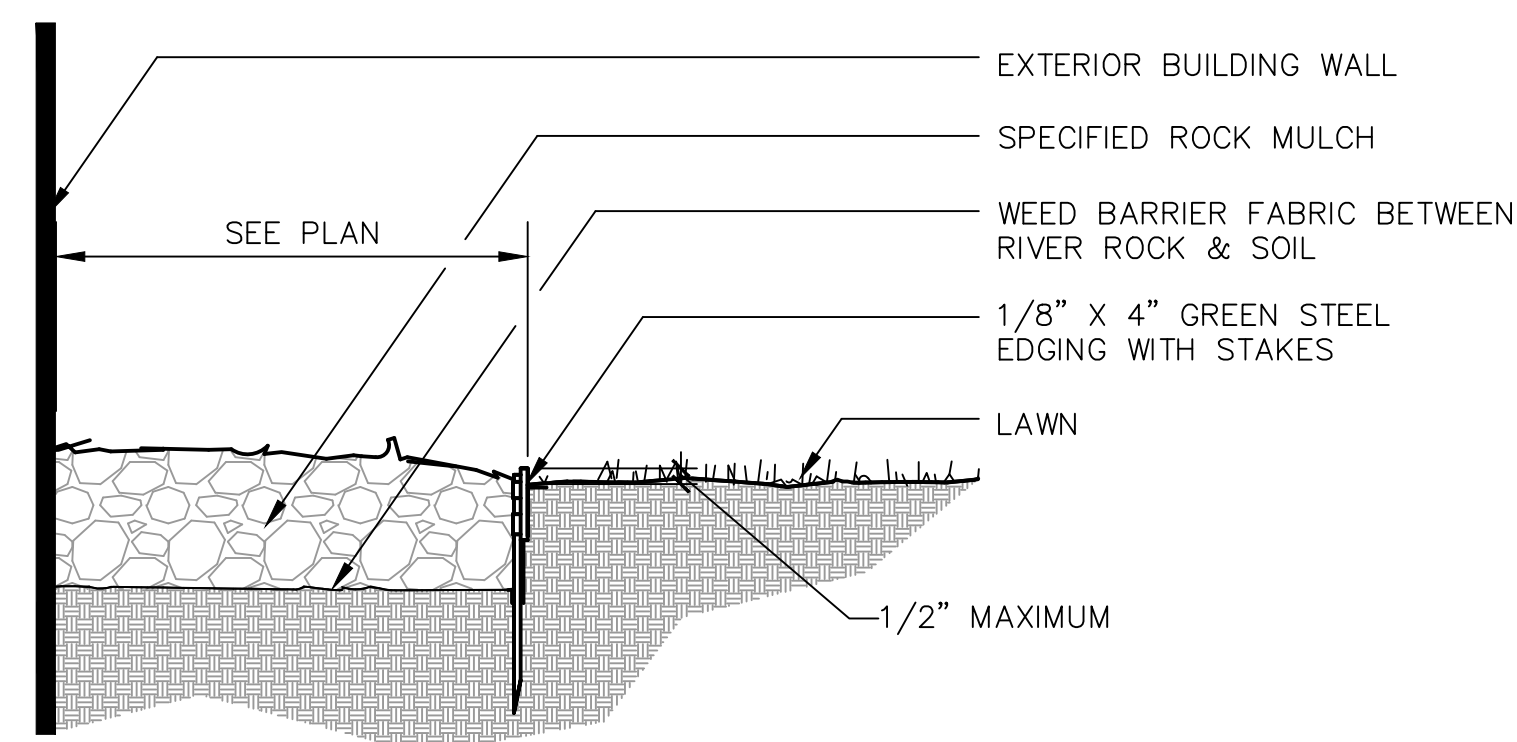


- NOTES:
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.
 2. IN AREAS OF TURF, SURROUND BED WITH 6" DIAMETER OF MULCH.

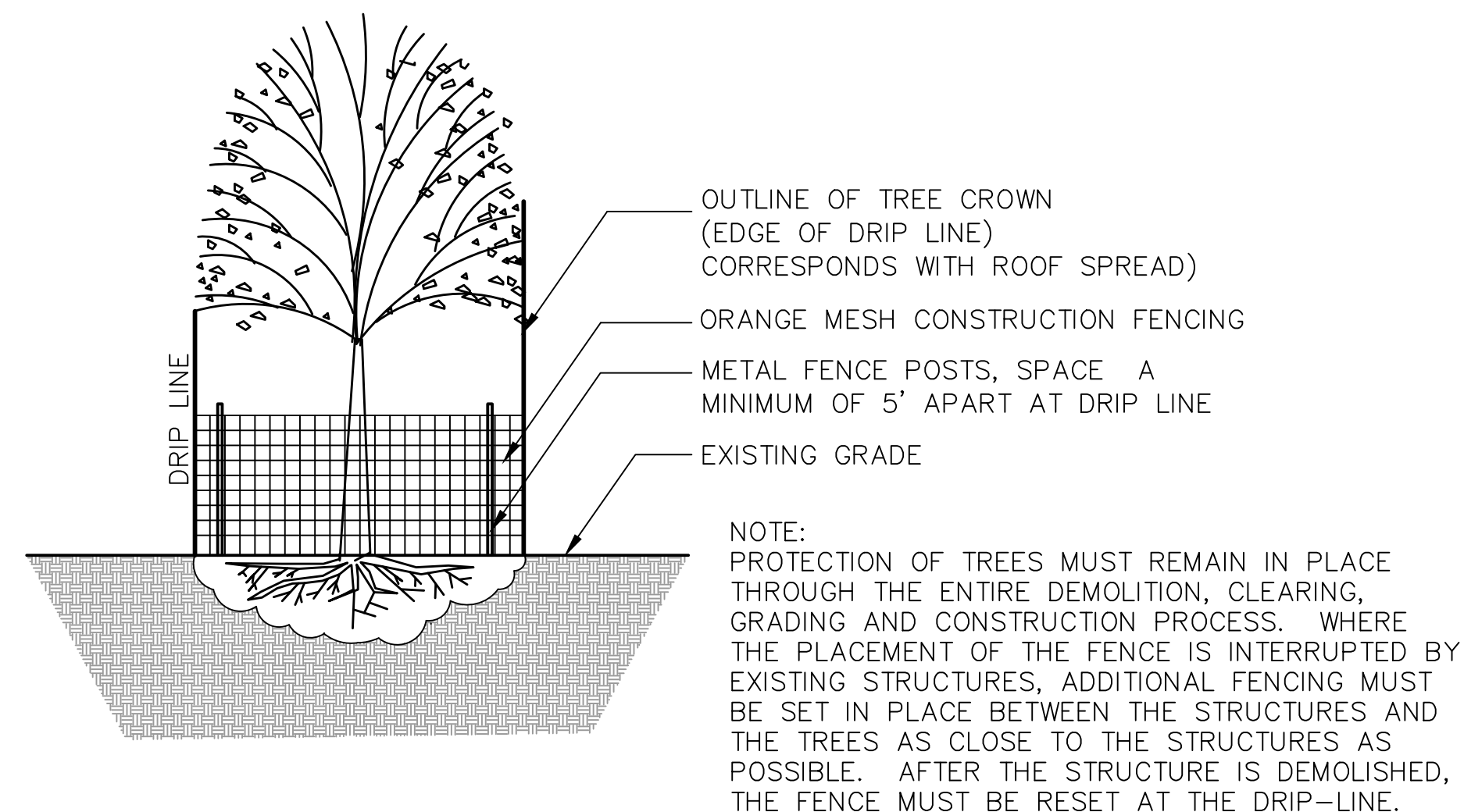
2 DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



4 EXISTING TREE PROTECTION PLAN
NOT TO SCALE



3 MOW STRIP DETAIL
NOT TO SCALE



5 EXISTING TREE PROTECTION DETAIL
NOT TO SCALE

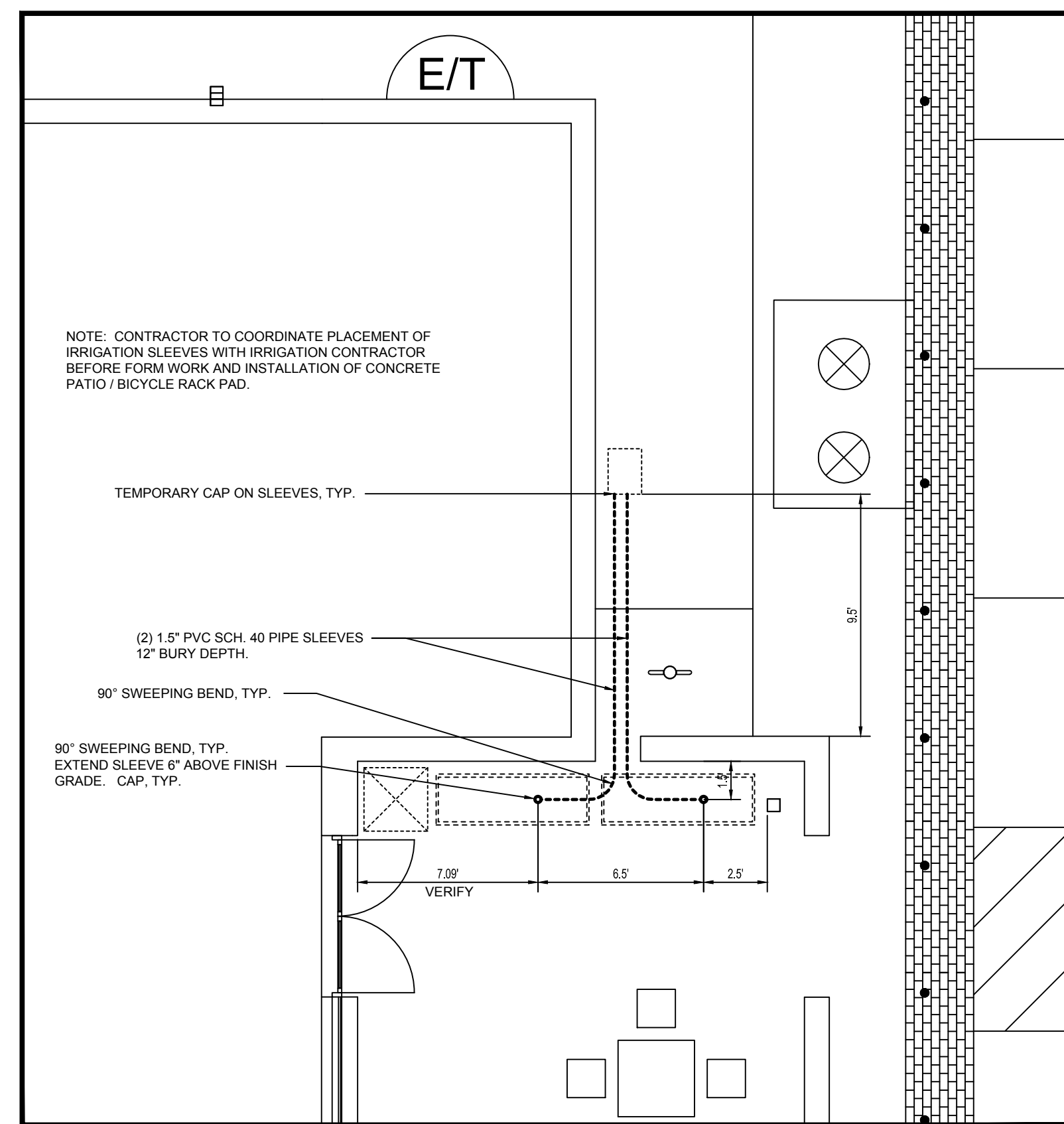
SODDING NOTES

1. UNLESS OTHERWISE NOTED ON PLANS, ALL DISTURBED AREAS SHALL BE SODDED WITH TURF-TYPE TALL FESCUE SOD WITH A MINIMUM OF 3 CULTIVARS. AREAS CALLED OUT ON PLANS TO BE SEEDED SHALL BE SEEDED WITH MATCHING TURF-TYPE TALL FESCUE SEED WITH A MINIMUM OF 3 CULTIVARS.
2. ALL LAWN AREAS SHALL RECEIVE A MINIMUM 6-INCH DEPTH OF TOPSOIL COMPACTED TO 85% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
3. THE ENTIRE SURFACE TO BE SODDED SHALL BE REASONABLY SMOOTH AND FREE FROM STONES, ROOTS, OR OTHER DEBRIS.
4. SOD SHALL BE MACHINE STRIPPED AT A UNIFORM SOIL THICKNESS OF APPROXIMATELY ONE INCH (PLUS OR MINUS 1/4-INCH). THE MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH, AND SHALL BE DETERMINED AT THE TIME OF CUTTING IN THE FIELD. PRECAUTIONS SHALL BE TAKEN TO PREVENT DRYING AND HEATING. SOD DAMAGED BY HEAT AND DRY CONDITIONS, AND SOD CUT MORE THAN 18 HOURS BEFORE BEING INCORPORATED INTO THE WORK SHALL NOT BE USED.
5. HANDLING OF SOD SHALL BE DONE IN A MANNER THAT WILL PREVENT TEARING, BREAKING, DRYING AND OTHER DAMAGE. PROTECT EXPOSED ROOTS FROM DEHYDRATION. DO NOT DELIVER MORE SOD THAN CAN BE LAID WITHIN 24 HOURS.
6. MOISTEN PREPARED SURFACE IMMEDIATELY PRIOR TO LAYING SOD. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE INSTALLING SOD. FERTILIZE, HARROW OR RAKE FERTILIZER IN THE TOP 1-1/2-INCHES OF TOPSOIL, AT A UNIFORM RATE OF ONE POUND OF NITROGEN PER 1000 S.F.
7. SOD SHALL BE CAREFULLY PLACED IN THE DIRECTION PARALLEL WITH THE SLOPE OF THE AREA TO BE SODDED. SOD STRIPS SHALL BE BUTTED TOGETHER BUT NOT OVERLAPPED WITH THE SEAMS STAGGERED ON EACH ROW.
8. FERTILIZER SHALL BE 20-10-5 COMMERCIAL FERTILIZER OF THE GRADE, TYPE, AND FORM SPECIFIED AND SHALL COMPLY WITH THE RULES OF THE STATE OF OKLAHOMA DEPT. OF AGRICULTURE. FERTILIZER SHALL BE IDENTIFIED ACCORDING TO THE PERCENT N, P, K, IN THAT ORDER.
9. ALL SOD ON SLOPES GREATER THAN 5:1 SHALL BE STAKED.
10. SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF PLANTING. DURING FIRST WEEK AFTER PLANTING, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF FOUR INCHES BELOW SOD.
11. CONTRACTOR SHALL PROVIDE FULL MAINTENANCE FOR SODDED TURF GRASS FOR A PERIOD OF 30 DAYS AFTER THE DATE OF FINAL ACCEPTANCE OR STORE OPENING, WHICHEVER IS GREATER. AT THE END OF THE MAINTENANCE PERIOD, A HEALTHY, WELL-ROOTED, EVEN-COLORED, VIABLE TURF MUST BE ESTABLISHED. THE TURF GRASS SHALL BE FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.

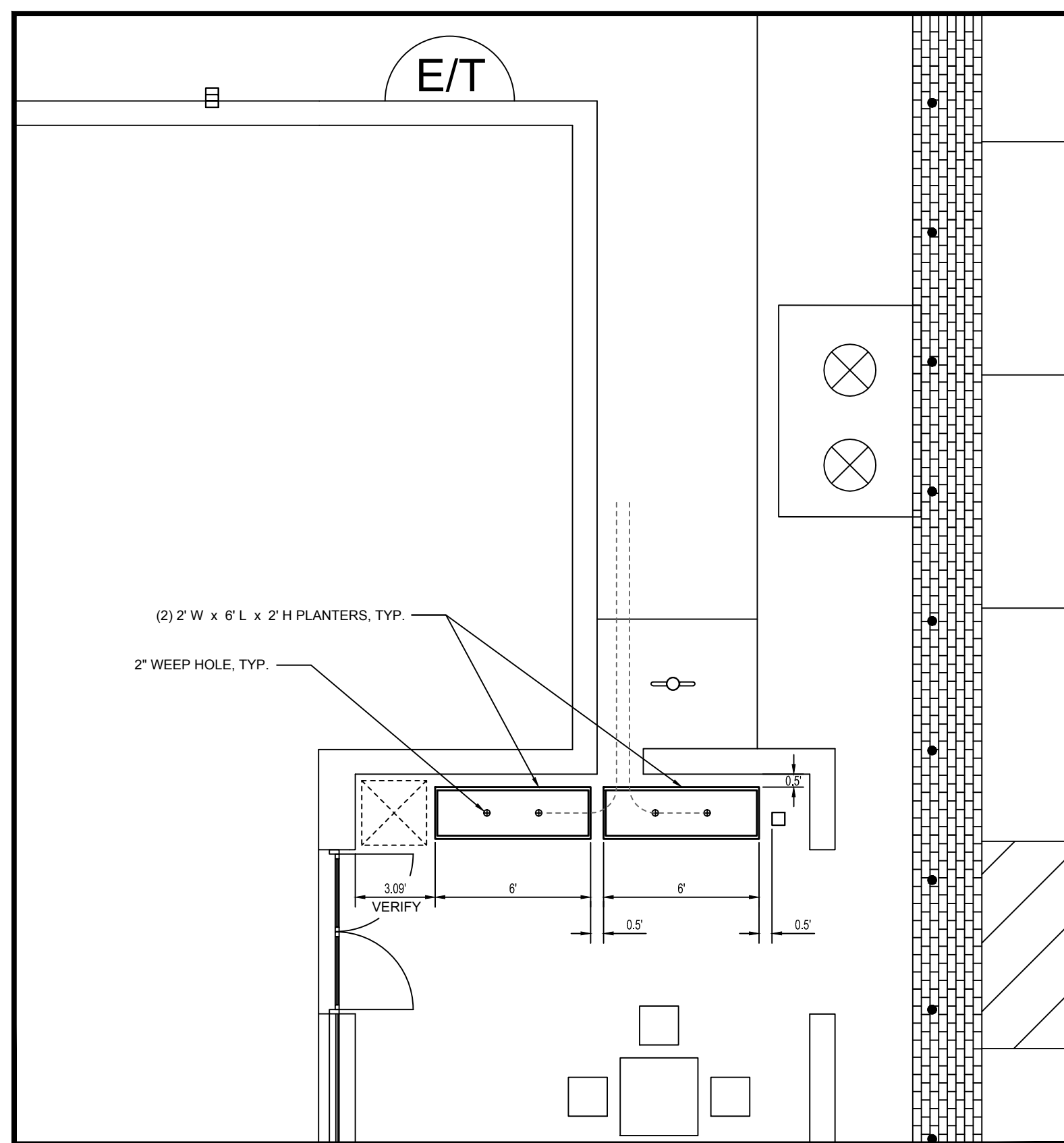
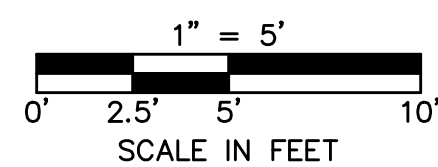
GENERAL NOTES

1. ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES.
2. LOCATE AND FLAG ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL PROTECT EXISTING OVERHEAD AND UNDERGROUND UTILITIES. ANY DAMAGE TO SUCH SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
3. PLANTS AND OTHER MATERIALS ARE QUANTIFIED AND SUMMARIZED FOR THE CONVENIENCE OF THE CITY AND LOCAL GOVERNING BODIES. CONFIRM AND INSTALL SUFFICIENT QUANTITIES TO COMPLETE THE WORK AS DRAWN.
4. PLAN IS SUBJECT TO CHANGES BASED ON PLANT SIZE AND MATERIAL AVAILABILITY. ALL CHANGES OR SUBSTITUTIONS MUST BE APPROVED BY THE CITY OF BROKEN ARROW, OKLAHOMA AND THE LANDSCAPE ARCHITECT.
5. ALL PLANT MATERIAL SHALL BE NURSERY GROWN TO MEET MINIMUM SIZE AS SPECIFIED IN THE AMERICAN STANDARD FOR NURSERY STOCK ESTABLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA). THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. PLANTING OF SHRUBS, SOD AND SEEDED TURFGRASS SHALL BE COMMENCED DURING EITHER THE SPRING (MARCH 15-JUNE 15) OR FALL (SEPTEMBER 1 - OCTOBER 15) PLANTING SEASON AND WITH WATER AVAILABLE FOR IRRIGATION PURPOSES.
7. THE LANDSCAPE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND MATERIALS INJURIOUS TO PLANT GROWTH FROM PLANTING PITS AND BEDS PRIOR TO BACKFILLING WITH PLANTING MIX.
8. A PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL SHRUB BEDS PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
9. BACKFILL ALL PLANTING BEDS TO A MINIMUM 12-INCH DEPTH WITH PLANTING SOIL MIX. PLANTING SOIL MIX SHALL CONSIST OF ONE (1) PART PERLITE, ONE (1) PART PEAT MOSS, AND TWO (2) PARTS CLEAN LOAM TOPSOIL. THOROUGHLY MIX PLANTING SOIL COMPONENTS PRIOR TO PLACEMENT.
10. ALL PLANTING AREAS EXCEPT SOD AREAS AND PERENNIAL BEDS SHALL CONTAIN RIVER ROCK MULCH AND INCLUDE A GEOTEXTILE WEED BARRIER FABRIC, UNLESS CALLED OUT OTHERWISE ON PLANS. RIVER ROCK SHALL BE 4"-6" IN DIAMETER AND 8" IN DEEP IN ALL AREAS.
11. ALL LANDSCAPE AREAS AND SOD AREAS SHALL BE IRRIGATED WITH A HIGH-EFFICIENCY, AUTOMATIC IRRIGATION SYSTEM ACHIEVING 100% EVEN COVERAGE OF ALL LANDSCAPE AREAS. IRRIGATION SYSTEM SHALL BE DESIGNED TO MEET ALL CITY REQUIREMENTS. DRIP IRRIGATION SHALL BE USED IN ALL LANDSCAPE BEDS AND SPRAY HEADS SHALL BE USED ON ALL SODDED AREAS. REFER TO CIVIL PLANS FOR IRRIGATION METER LOCATION.
12. STEEL LANDSCAPE EDGING IS TO BE USED ON ALL LANDSCAPE BEDS OR ROCK BEDS ABUTTING SODDED AREAS AS NOTED ON LANDSCAPE PLANS.
13. KILL AND REMOVE ALL EXISTING WEEDS FROM THE SITE AREA PRIOR TO PLANTING.
14. THE ENTIRE SURFACE TO BE SEEDED SHALL BE REASONABLY SMOOTH AND FREE FROM STONES, ROOTS, OR OTHER DEBRIS.
15. ALL DISTURBED AREAS, WITH THE EXCEPTION OF PAVED, GRAVEL OR SODDED AREAS, SHALL BE HYDROSEEDING WITH A BLEND OF 90% IMPROVED TURF-TYPE TALL FESCUE AND 10% ANNUAL RYE AT A RATE OF 10 LBS/1,000 SF.
16. HYDROSEED MIX SHALL INCLUDE:
CONWEB OR SILVA FIBER - 1,500 LBS/AC.
FERTILOME 9-13-7 FERTILIZER - 500 LBS/AC
CONWEB TACKIFIER - 40 LBS/AC (7 LBS/100 GAL)
17. ALL AREAS TO BE HYDROSEEDING SHALL BE SCARIFIED PRIOR TO SEEDING TO ENSURE A FIRM BUT FRIABLE SEED BED.
18. PRIOR TO HYDROSEEDING GERMINATION, A PREEMERGENT HERBICIDE SHALL BE APPLIED. THE CONTRACTOR IS RESPONSIBLE FOR COMPATIBILITY OF HERBICIDE WITH HYDROSEEDING PLANT MATERIAL.
19. SEEDING AND MULCHING MUST BE DONE WHENEVER WORK IS COMPLETE REGARDLESS OF THE SEASON. WHENEVER SEEDING AND MULCH IS INSTALLED OUTSIDE THE PERMANENT SEEDING SEASON, THE CONTRACTOR WILL BE RESPONSIBLE FOR REPLANTING AND MULCHING ANY AREAS WHERE GROWTH HAS NOT BECOME ESTABLISHED DURING THE NEXT PERMANENT SEEDING SEASON.
20. LANDSCAPE CONTRACTOR IS TO BE RESPONSIBLE FOR WATERING ALL PLANT MATERIALS UNTIL THE TIME THE PERMANENT IRRIGATION SYSTEM IS FULLY FUNCTIONAL AND ACCEPTANCE OF THE PROJECT HAS TAKEN PLACE. ANY MATERIAL WHICH DIES, OR DEFOLIATES (PRIOR TO ACCEPTANCE OF THE WORK) WILL BE PROMPTLY REMOVED AND REPLACED.
21. THE CONTRACTOR WILL COMPLETELY GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE, OR STORE OPENING, WHICHEVER IS GREATER. CONTRACTOR WILL MAKE ALL REPLACEMENTS PROMPTLY (AS PER DIRECTION OF OWNER).

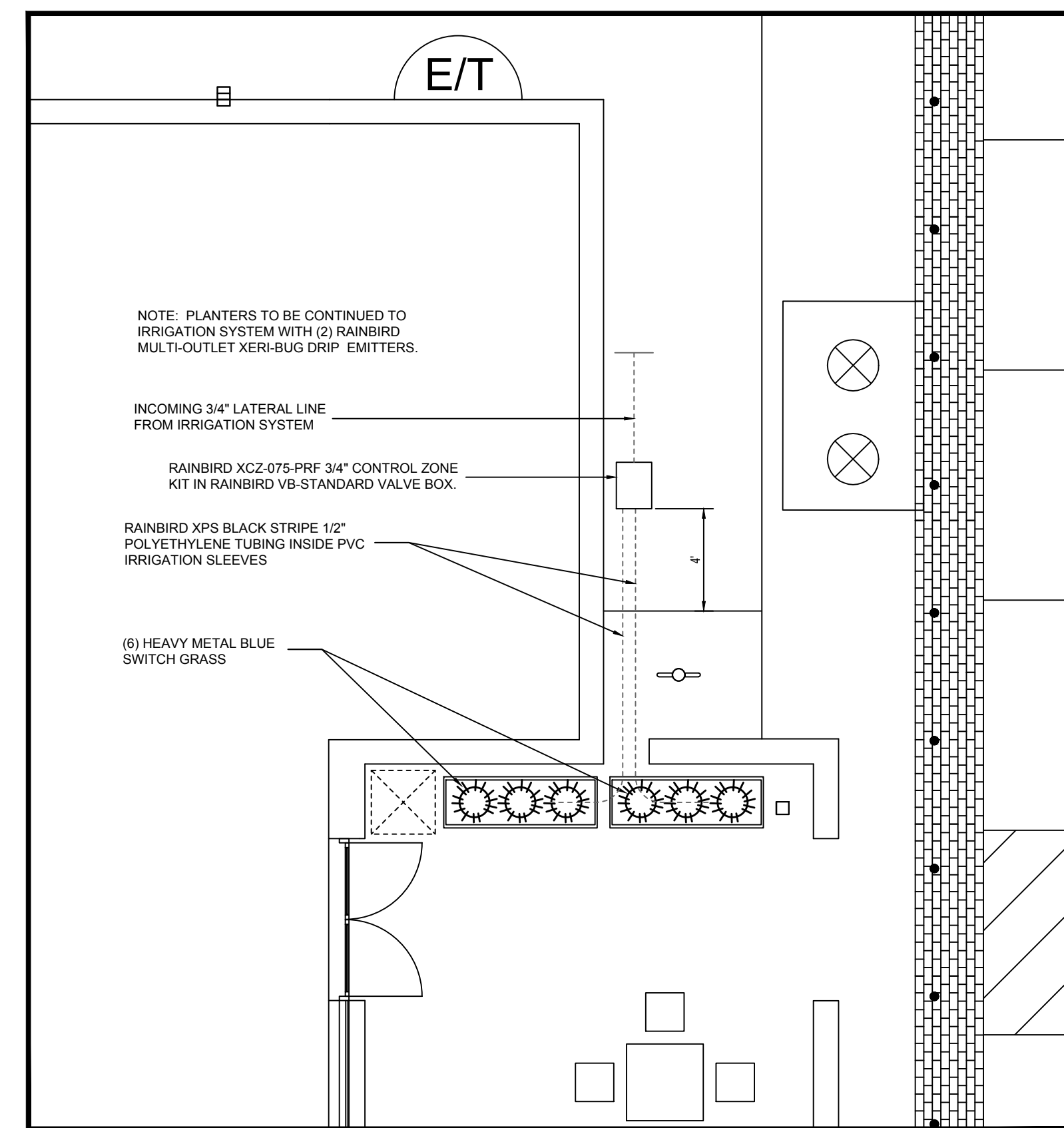
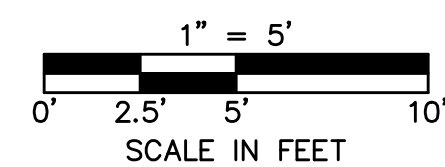
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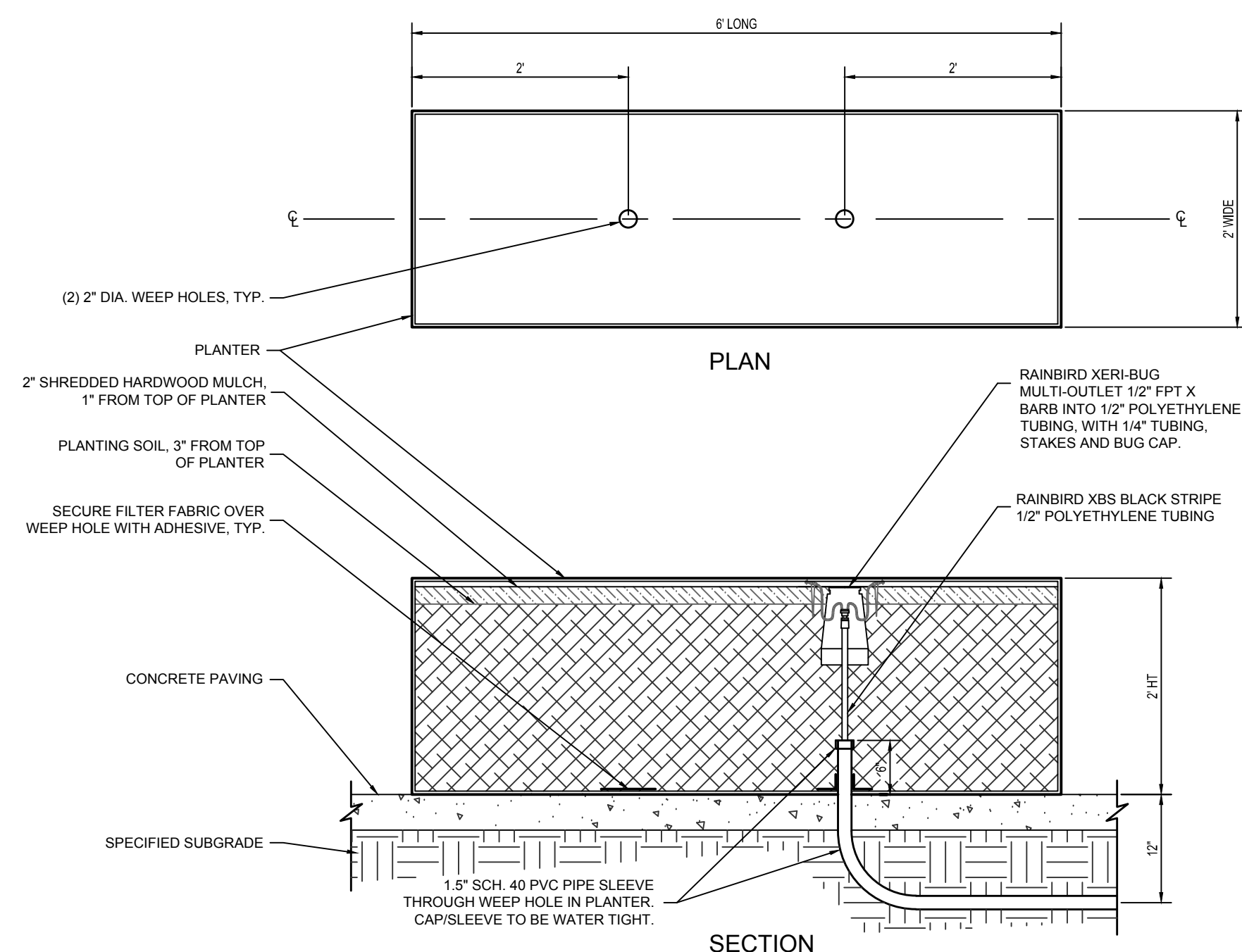
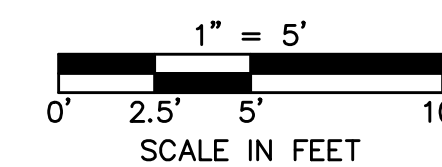
IRRIGATION SLEEVES AT PATIO



PLANTER LAYOUT AT PATIO



PLANTINGS AT PATIO



A PLANTER DETAIL
NOT TO SCALE

PLANT LIST						
QTY.	SYMBOL	COMMON / SCIENTIFIC NAME	PLANTING SIZE	MATURE WIDTH	MATURE HEIGHT	NOTES
PERENNIALS						
6		HEAVY METAL BLUE SWITCH GRASS - PANICUM VIRGATUM HEAVY METAL	1 GAL.	18"-30"	30"-36"	

PLANTING SOIL SPECIFICATIONS:

PLANTING SOIL: A UNIFORM MIX OF FREE OF PLANT RESIDUE, STONES, STUMPS ROOTS OR SIMILAR OBJECTS LARGER THAN 1 INCH. MIXTURE OF TOPSOIL, ORGANIC COMPOST AND SAND CONSISTING OF THE FOLLOWING:

- 15% BY VOLUME ORGANIC COMPOST
- 15% BY VOLUME SAND
- 70% BY VOLUME TOPSOIL

ORGANIC COMPOST: WELL DECOMPOSED, STABLE, WEED FREE ORGANIC MATTER SOURCE. IT SHALL BE DERIVED FROM: AGRICULTURE, FOOD, OR INDUSTRIAL RESIDUALS; BIOSOLIDS (TREATED SEWAGE SLUDGE); YARD TRIMMINGS AND LEAF RAKINGS; SOURCE-SEPARATED OR MIXED SOLID WASTE MEETING THE FOLLOWING CRITERIA:

- 100 PERCENT SHALL PASS THROUGH A 3/8 INCH SCREEN.
- PH OF 6.0 TO 8.5.
- MOISTURE CONTENT OF 30% TO 60% BY WEIGHT.
- NO SUBSTANCES TOXIC TO PLANTS.
- 1% OR LESS BY WEIGHT MANUFACTURED FOREIGN MATTER.
- NO OBJECTIONABLE ODOR.
- SHALL NOT RESEMBLE THE RAW MATERIAL FROM WHICH IT DERIVED.

TOPSOIL: SOIL CLASSIFICATION OF SANDY LOAM OR LOAMY SAND MEETING THE FOLLOWING CRITERIA:

- 50 TO 85 PERCENT BY WEIGHT SAND (2.0 TO 0.050MM) ACCORDING TO AASHTO T88.
- 5 TO 50 PERCENT BY WEIGHT SILT (0.050 TO 0.002MM) ACCORDING TO AASHTO T88.
- 2 TO 5 PERCENT BY WEIGHT CLAY (LESS THAN 0.002MM) ACCORDING TO AASHTO T88.
- 2 TO 10 PERCENT BY WEIGHT ORGANIC MATTER ACCORDING TO AASHTO T194.
- TEXTURAL ANALYSIS:
 - MINIMUM 100% BY WEIGHT PASSING THE 2" SIEVE PER ASTM E11.
 - MINIMUM 90% BY WEIGHT PASSING THE NO. 4 PER ASTM E11.
 - MINIMUM 80% BY WEIGHT PASSING THE NO. 10 SIEVE PER ASTM E11.

PLANTER SPECIFICATIONS:

PLANTER BY: TOURNESOL SITE WORKS
HAYWARD, CA
1-800-542-2282

MODEL: WILSHIRE COLLECTION - RECTANGLE
(WR-722424) 72"L x 24"W x 24"H

MATERIAL: FRP (FIBERGLASS REINFORCED PLASTIC)

FINISH: T-O (SMOOTH)

COLOR: PUDDLE (SEMI-GLOSS)



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50266
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#837 - BROKEN ARROW, OK
24055 E. HIGHWAY 51

PLANTER DETAILS

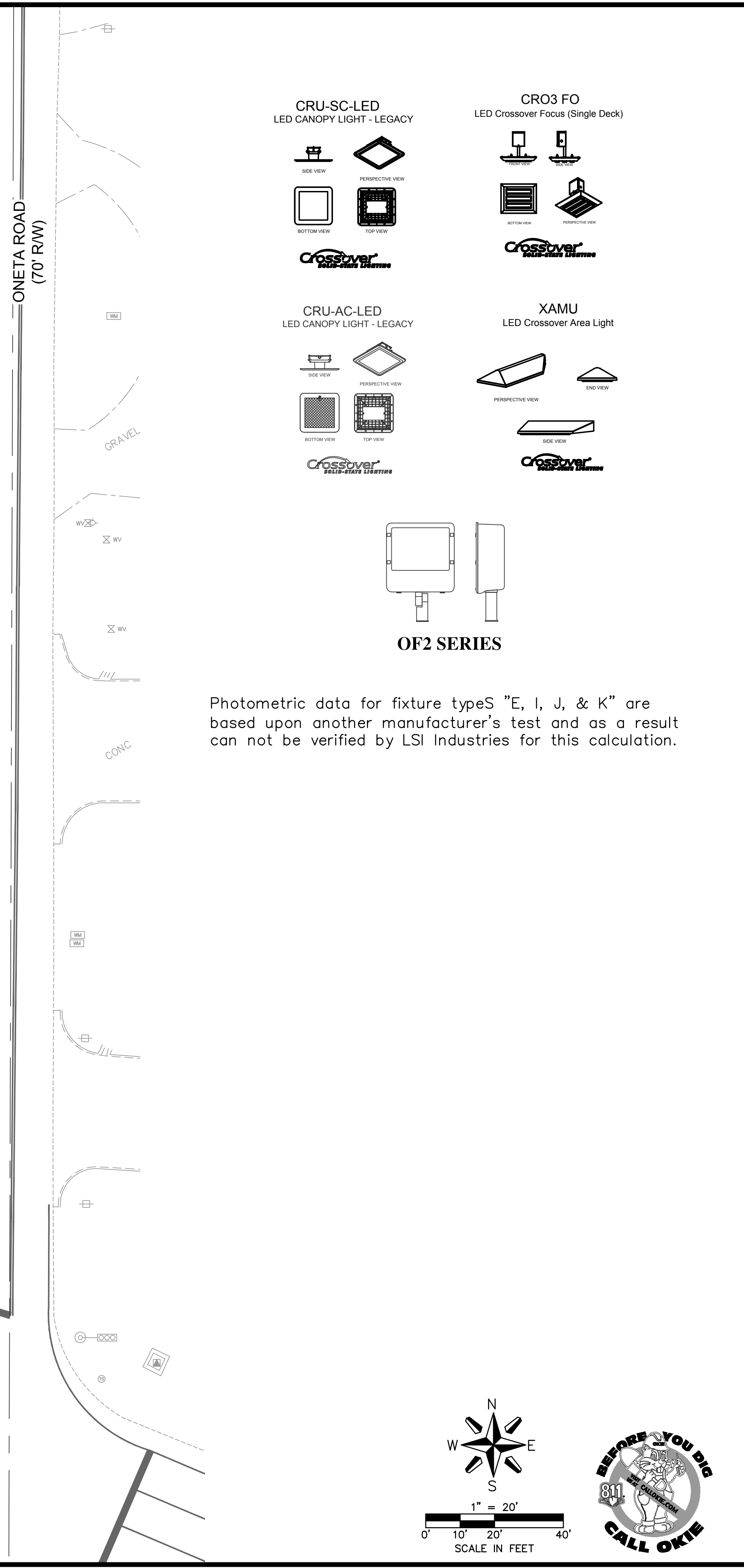
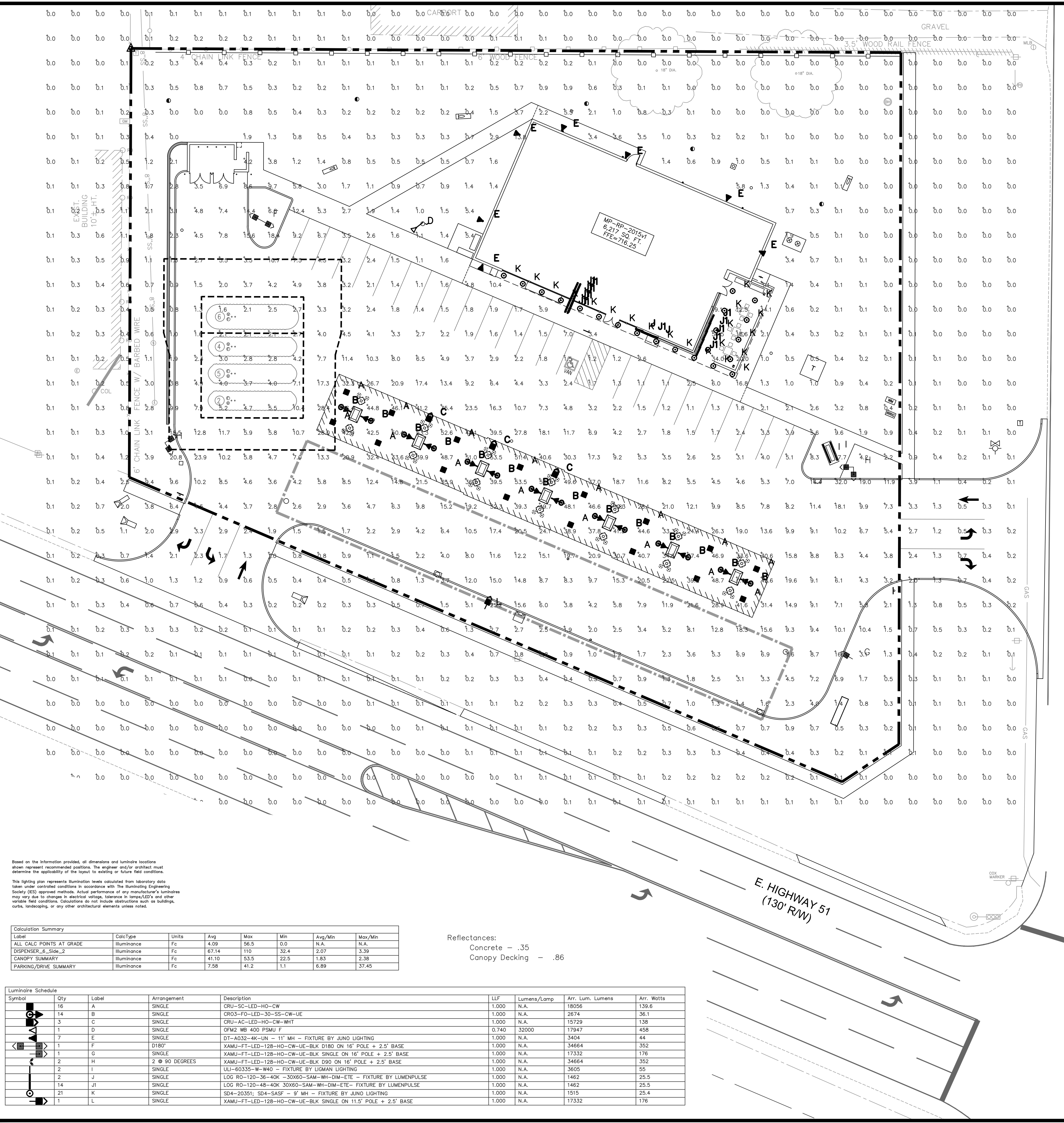
KG PROJECT TEAM:
RDR: JWH
SDM: NDH
CPM: SDN

REVISION DESCRIPTION	DATE

DATE: 12-09-15

SHEET NUMBER:
L1.3
8 OF 13

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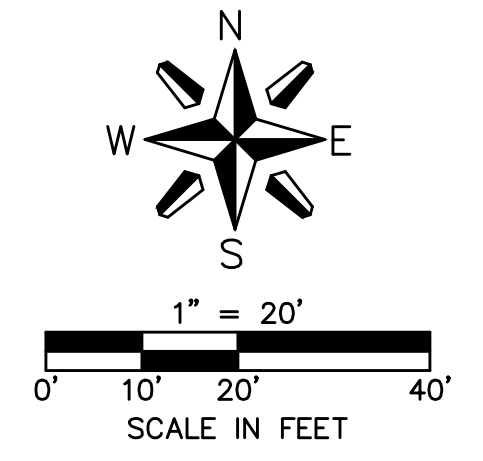
Photometric data for fixture type S "E, I, J, & K" are based upon another manufacturer's test and as a result can not be verified by LSI Industries for this calculation.

Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.
 This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with the Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamp/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, courts, landscaping, or any other architectural elements unless noted.

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ALL CALC POINTS AT GRADE	Fc	Footcandle	4.09	56.5	0.0	N.A.	N.A.
DISPENSER_Side_2	Fc	Footcandle	67.14	110	32.4	2.07	3.39
CANOPY SUMMARY	Fc	Footcandle	41.10	53.5	22.5	1.83	2.38
PARKING/DRIVE SUMMARY	Fc	Footcandle	7.58	41.2	1.1	6.89	37.45

Reflectances:
 Concrete - .35
 Canopy Decking - .86

Symbol	Qty	Label	Arrangement	Description	LLF	Lumens/Lamp	Arr. Lum. Lumens	Arr. Watts
A	16	C	SINGLE	CRU-SC-LED-HO-CW	1.000	N.A.	18056	139.6
B	14	B	SINGLE	CR03-FO-LED-30-SS-CW-UE	1.000	N.A.	2674	36.1
C	3	A	SINGLE	CRU-AC-LED-HO-CW-WHT	1.000	N.A.	15729	138
D	1	D	SINGLE	OFM2 WB 400 PSMU F	0.740	32000	17947	458
E	7	E	SINGLE	DT-A032-4K-UN - 11' MH - FIXTURE BY JUNO LIGHTING	1.000	N.A.	3404	44
F	1	F	SINGLE	D180° XAMU-FT-LED-128-HO-CW-UE-BLK D180 ON 16' POLE + 2.5' BASE	1.000	N.A.	34864	352
G	1	G	SINGLE	XAMU-FT-LED-128-HO-CW-UE-BLK SINGLE ON 16' POLE + 2.5' BASE	1.000	N.A.	17332	176
H	2	H	SINGLE	XAMU-FT-LED-128-HO-CW-UE-BLK D90 ON 16' POLE + 2.5' BASE	1.000	N.A.	34864	352
I	2	I	SINGLE	LIJ-90335-W-H42 - FIXTURE BY LUMENPULSE	1.000	N.A.	3605	55
J	2	J	SINGLE	LOG RO-120-36-40K-30X60-SAM-WH-DM-ETE - FIXTURE BY LUMENPULSE	1.000	N.A.	1462	25.5
K	14	K	SINGLE	LOG RO-120-48-40K-30X60-SAM-WH-DM-ETE - FIXTURE BY LUMENPULSE	1.000	N.A.	1462	25.5
L	21	L	SINGLE	SD4-20351; SD4-SASF - 9' MH - FIXTURE BY JUNO LIGHTING	1.000	N.A.	1515	25.4
M	1	M	SINGLE	XAMU-FT-LED-128-HO-CW-UE-BLK SINGLE ON 11.5' POLE + 2.5' BASE	1.000	N.A.	17332	176



INDUSTRIES™
 1000 WILLIAMS AVENUE, SUITE 1000
 CANTON, MASSACHUSETTS 01920

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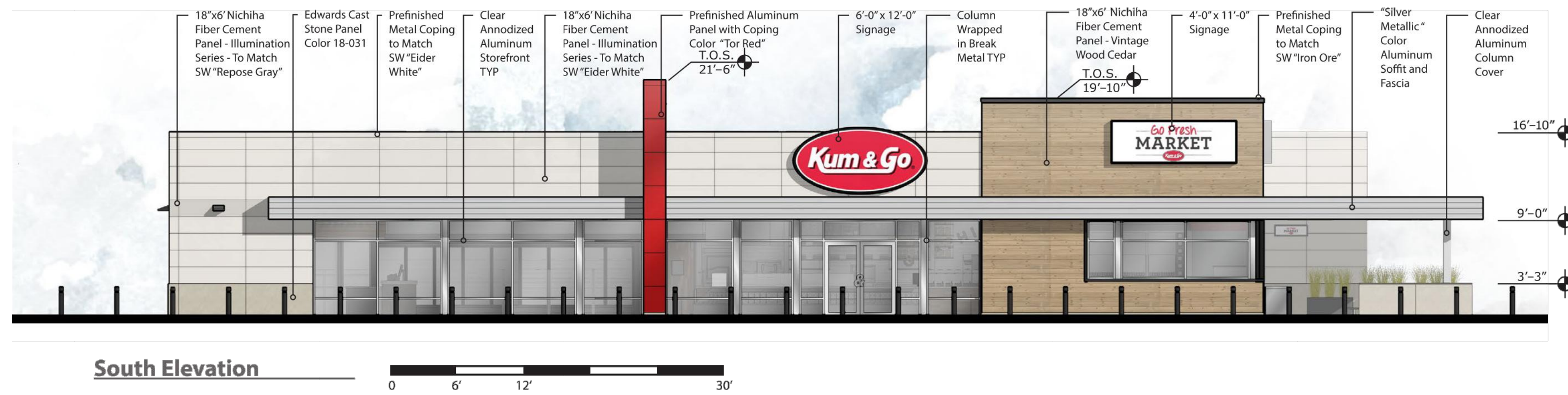
#837 - BROKEN ARROW, OK
 24055 E. HIGHWAY 51
 PHOTOMETRIC PLAN

REVISION DESCRIPTION	DATE

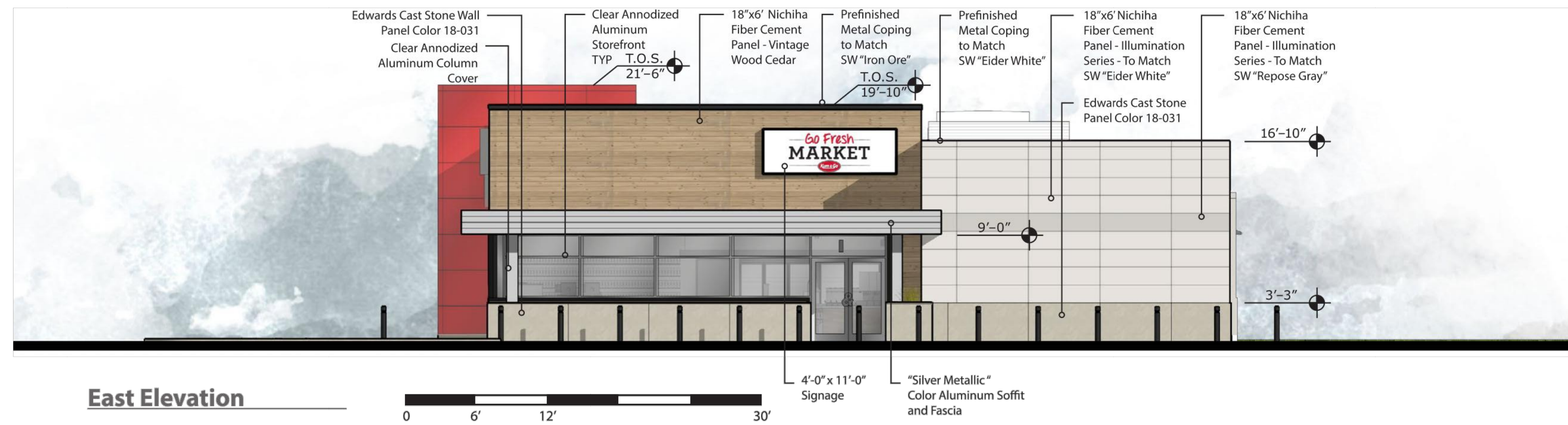
KG PROJECT TEAM:
 RDR: JWH
 SDM: NDH
 CPM: SDN

DATE: 12-09-15

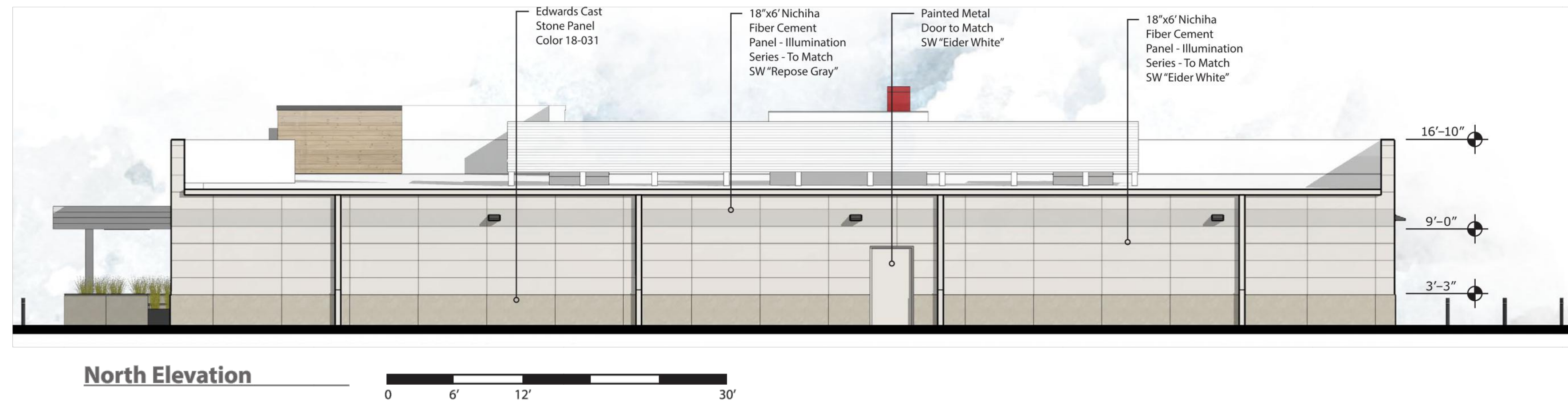
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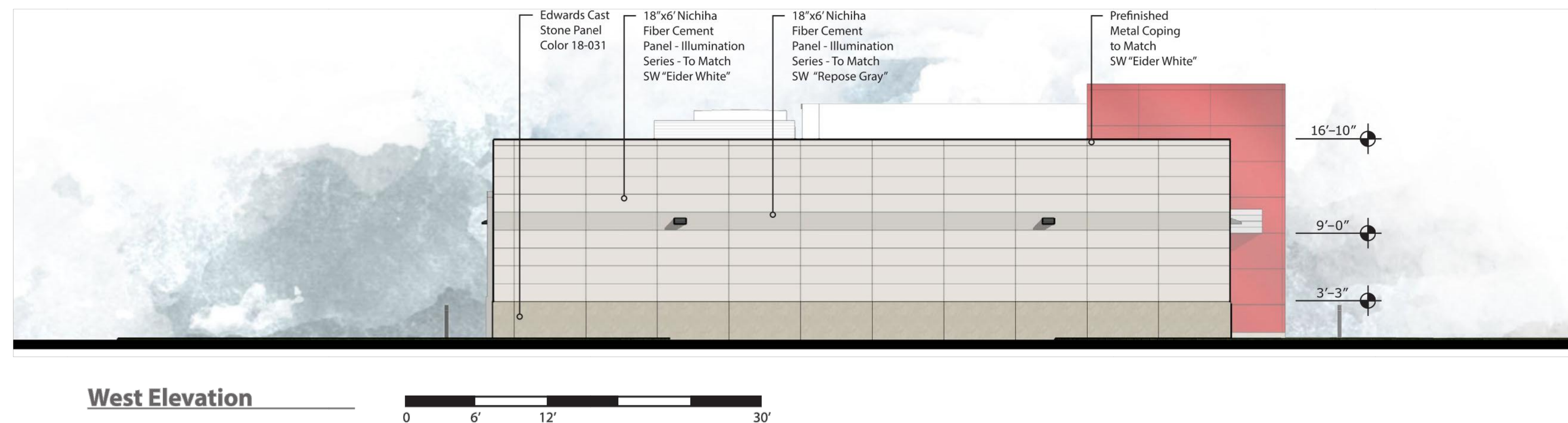
South Elevation



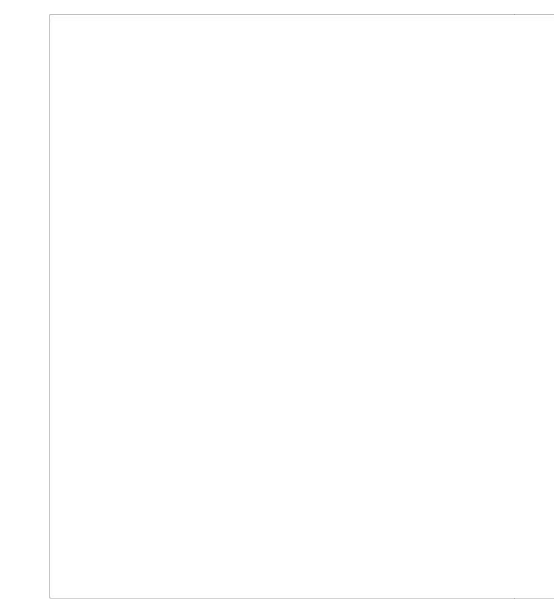
East Elevation



North Elevation



West Elevation



Architect of Record:
 BRE Architecture, Inc.
 6750 Antelope Plaza
 Des Moines, IA 50321
 Phone: 515-223-9873
 Fax: 515-223-9844



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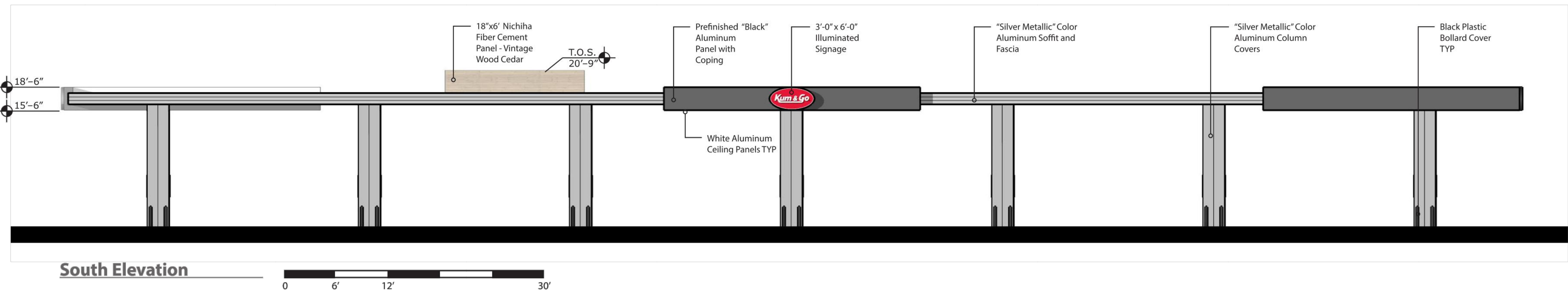
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 HWY 51 & ONETA RD
 EXTERIOR ELEVATIONS

KG PROJECT TEAM
 RDM:
 SDM:
 CPM:

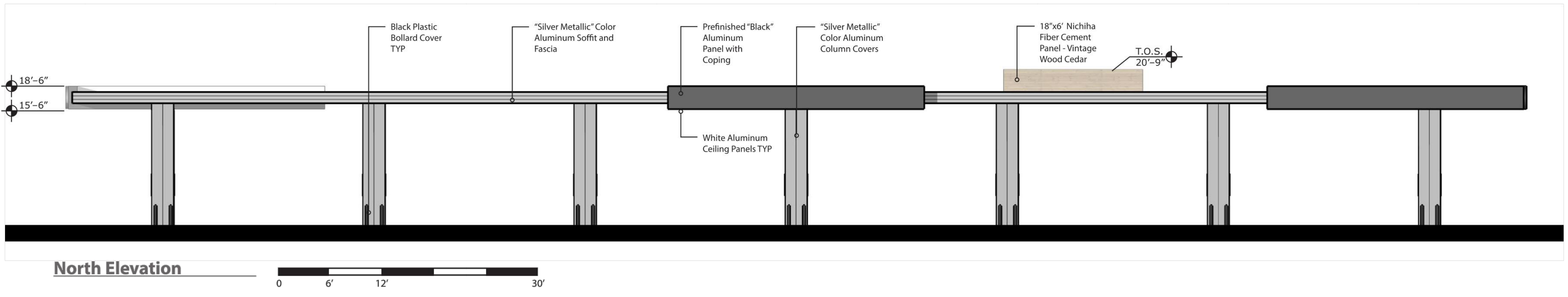
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DATE: 12-09-15

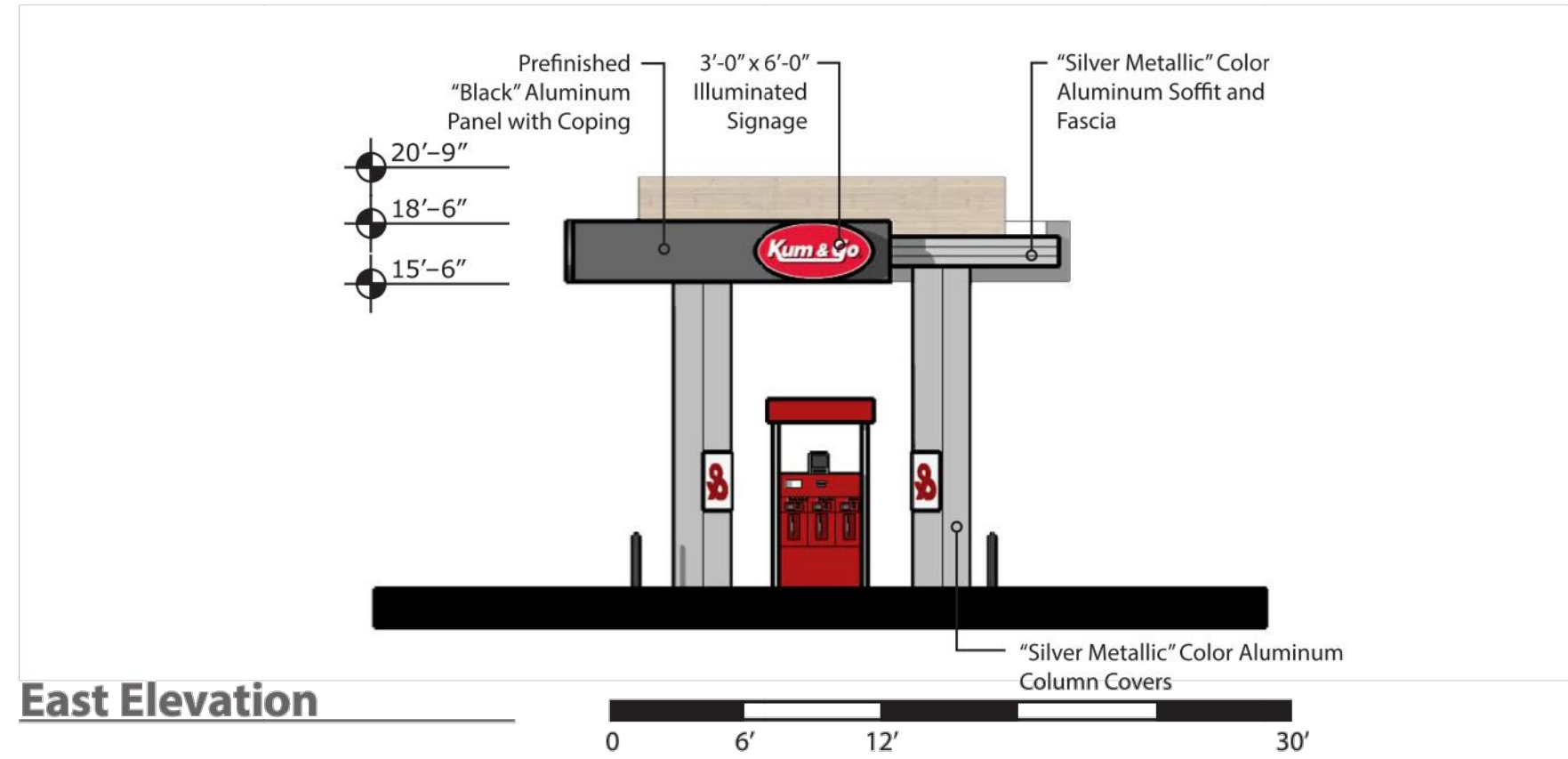
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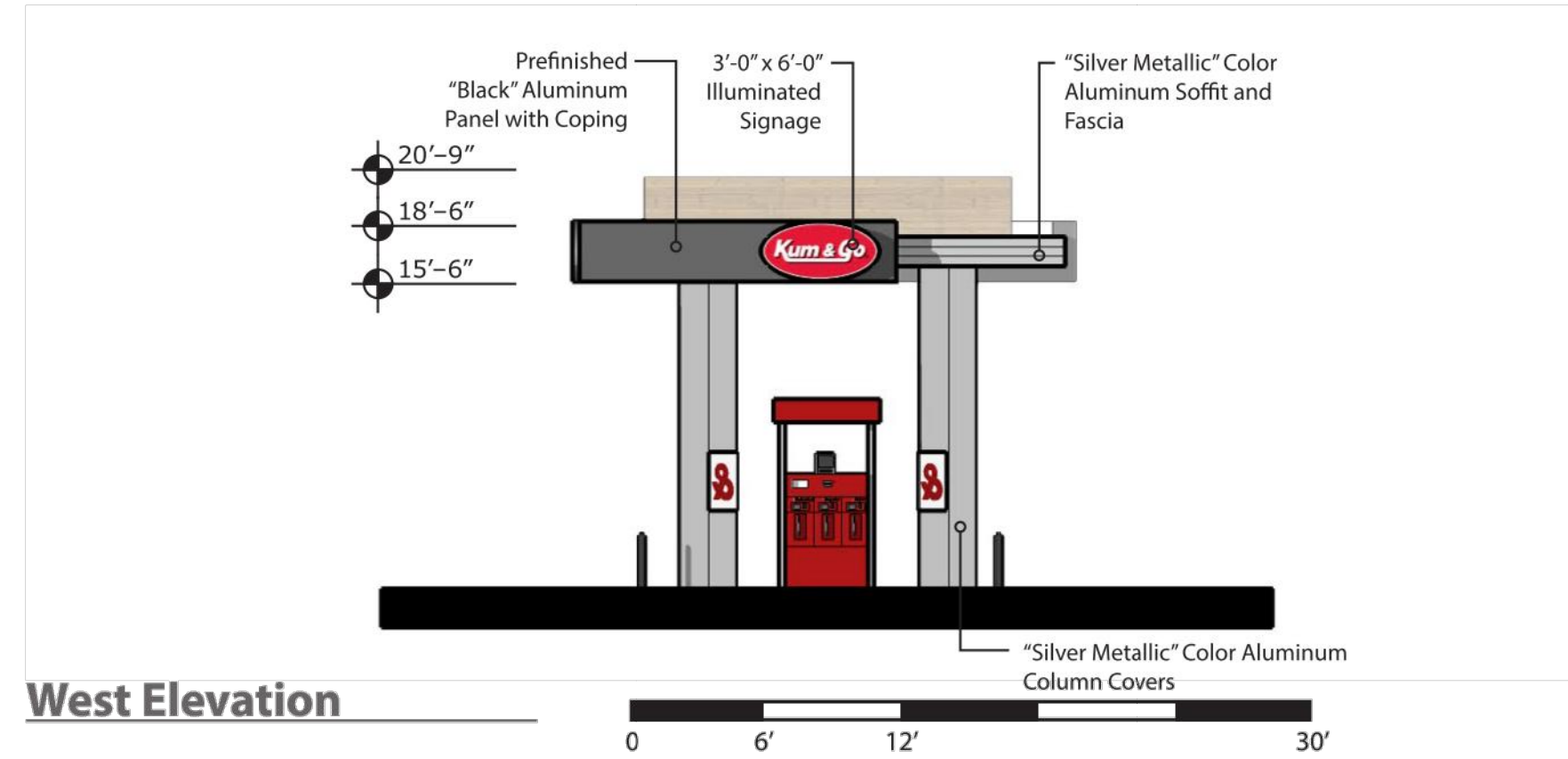
South Elevation



North Elevation

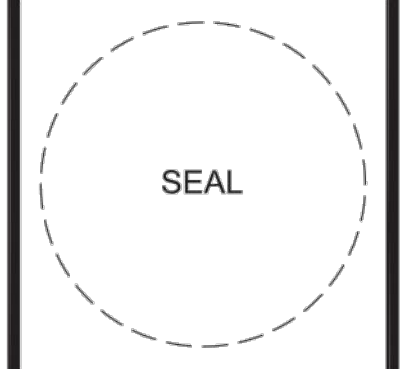


East Elevation



West Elevation

Architect of Record:
 BRE architecture, Inc.
 6750 Autumn Place
 Des Moines, IA 50321
 Phone: 515-223-9873
 Fax: 515-223-9874



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#837 - BROKEN ARROW, OK
 HWY 51 & ONETA RD
 CANOPY ELEVATIONS

KG PROJECT TEAM
 RDM:
 SDM:
 CPM:

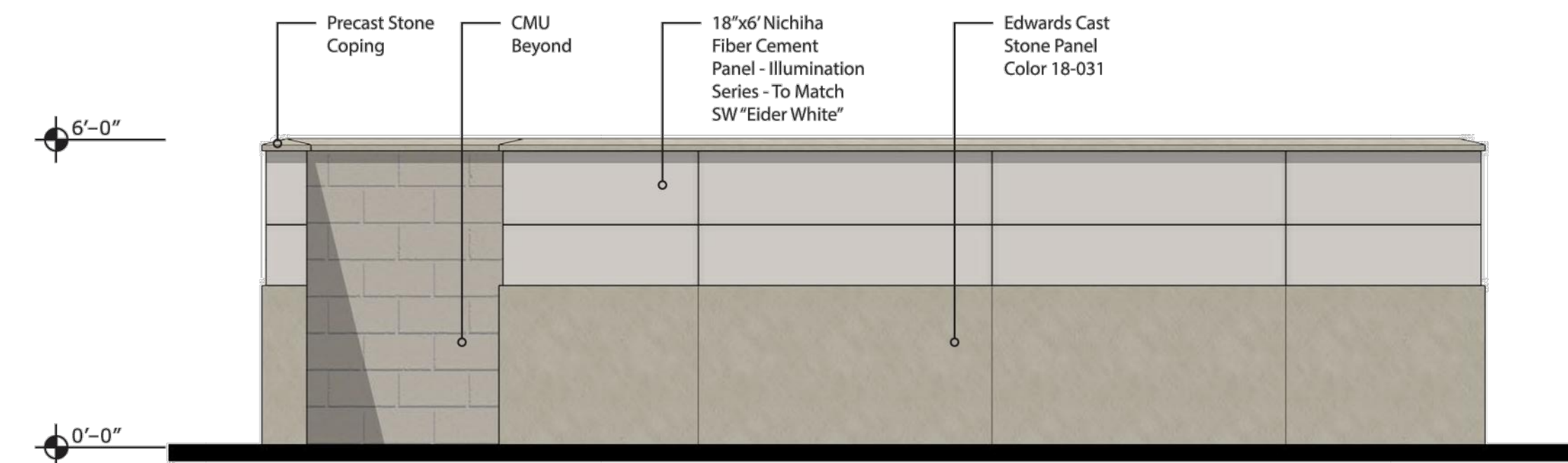
REVISION DESCRIPTION	DATE	BY

DATE: 12-09-15

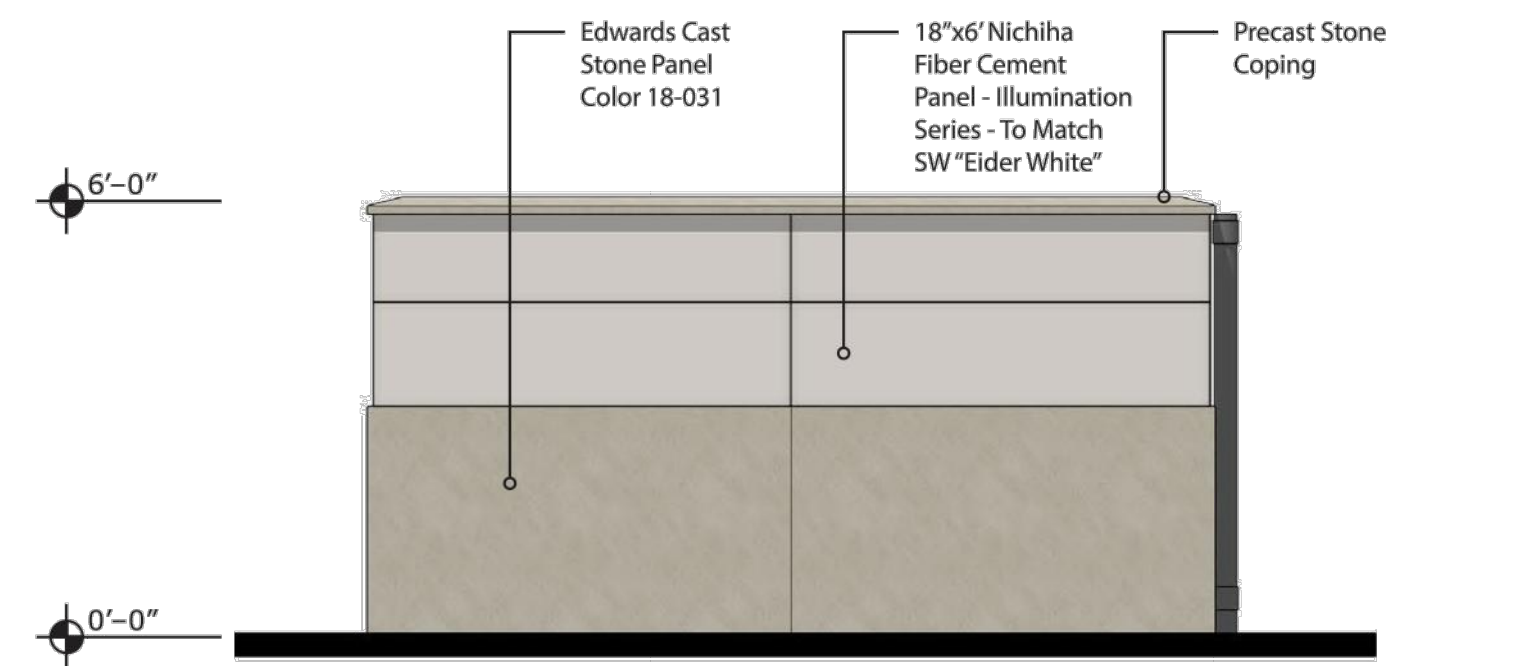
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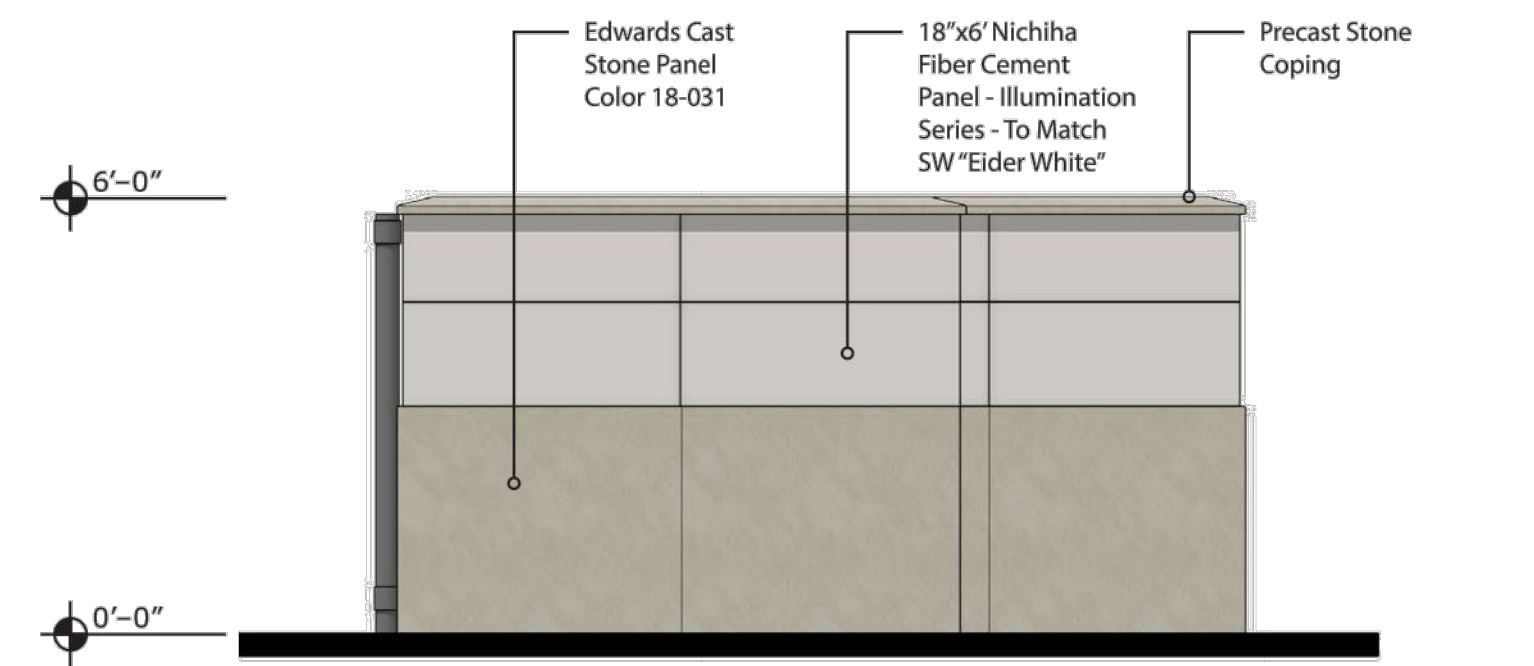
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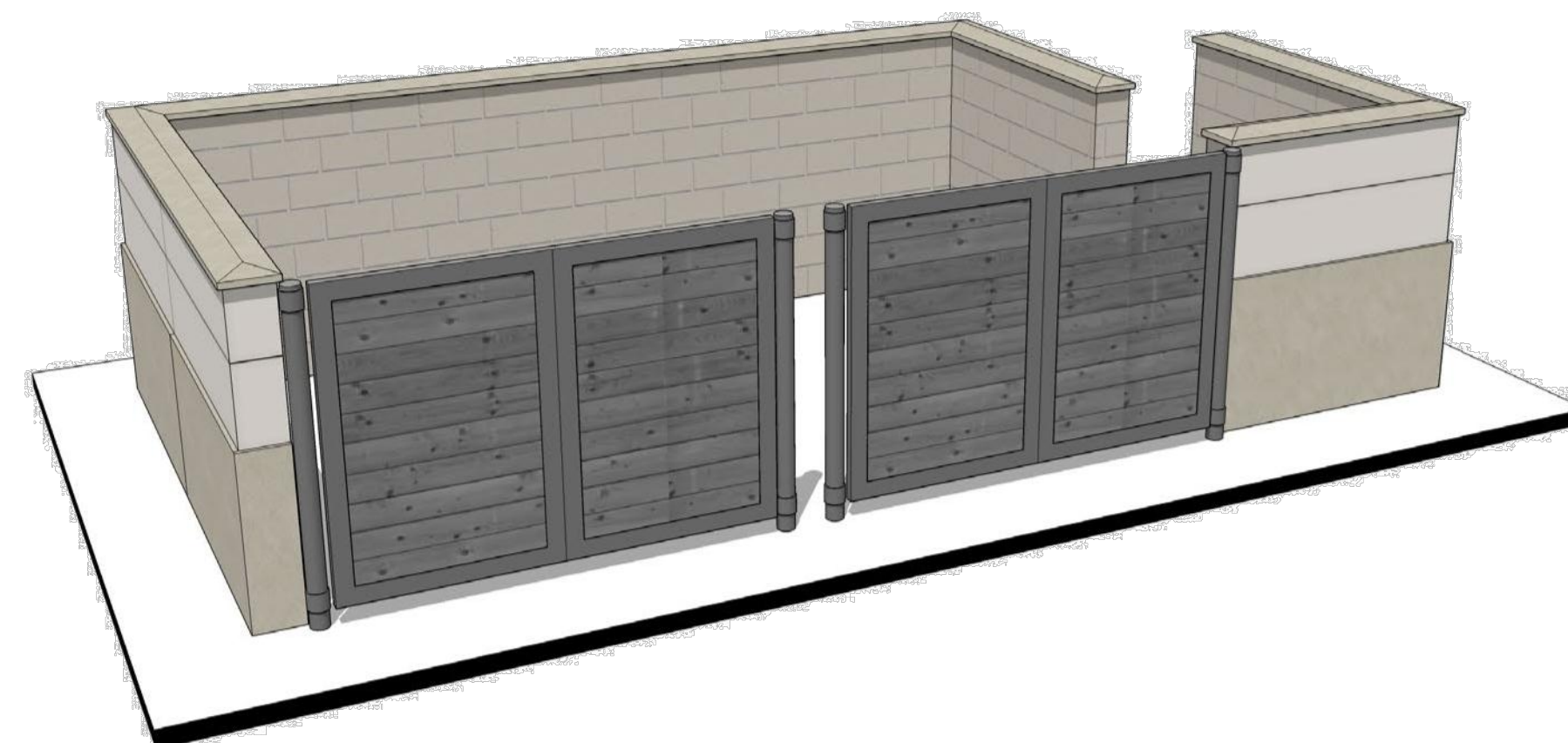
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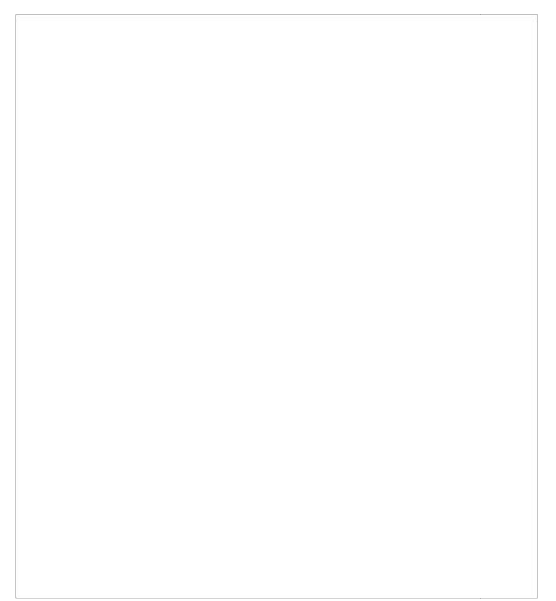
East Elevation



West Elevation



Perspective
Not To Scale



Architect of Record:
B|R|A Architecture, Inc.
6750 Astoria Plaza
Des Moines, IA 50325
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Fax: 515-226-9874



6400 Westown Parkway
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50266
P: 515-226-0128
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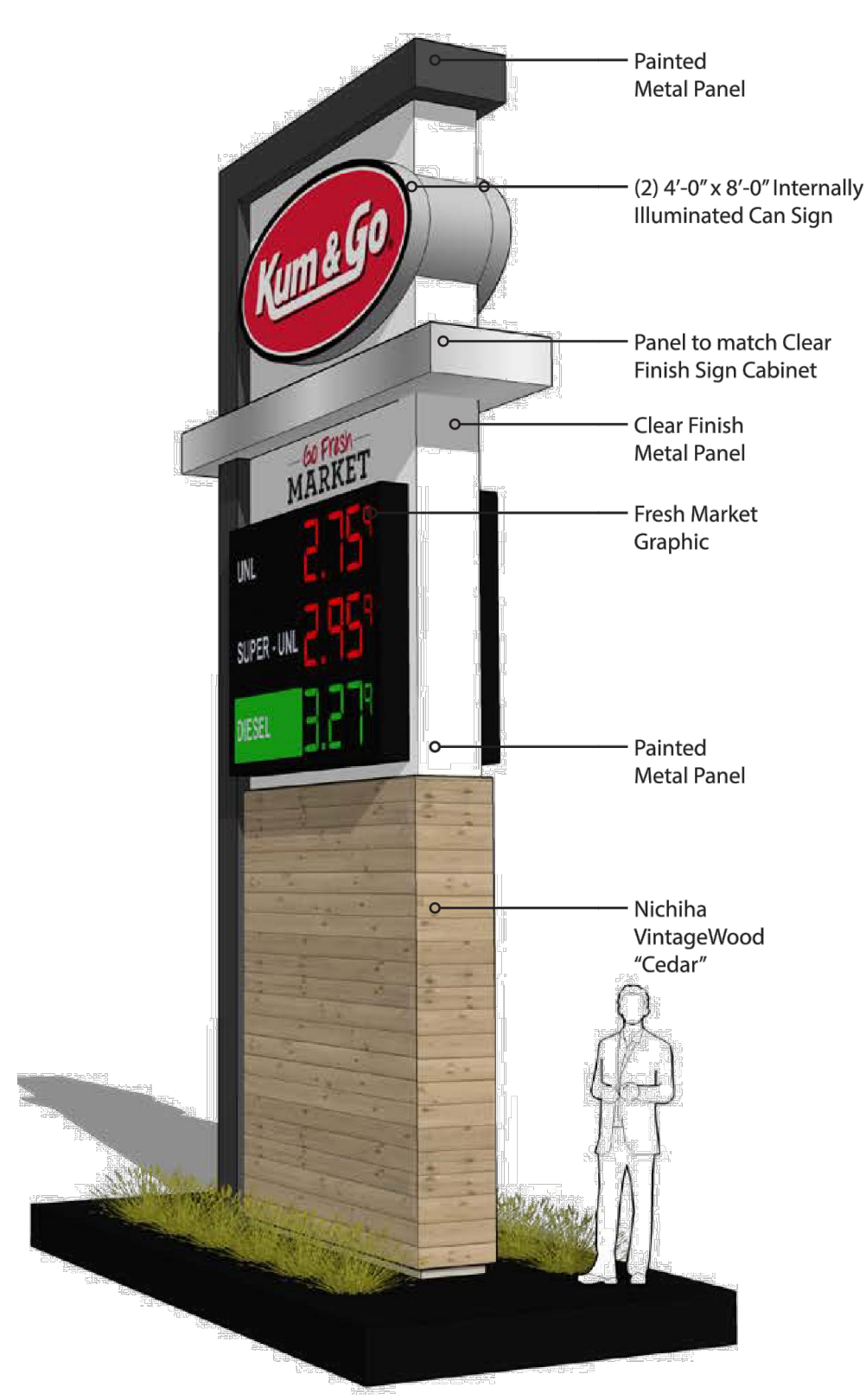
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HWY 51 & ONETA RD
TRASH ENCLOSURE ELEVATIONS

KG PROJECT TEAM:
RDM:
SDM:
CPM:

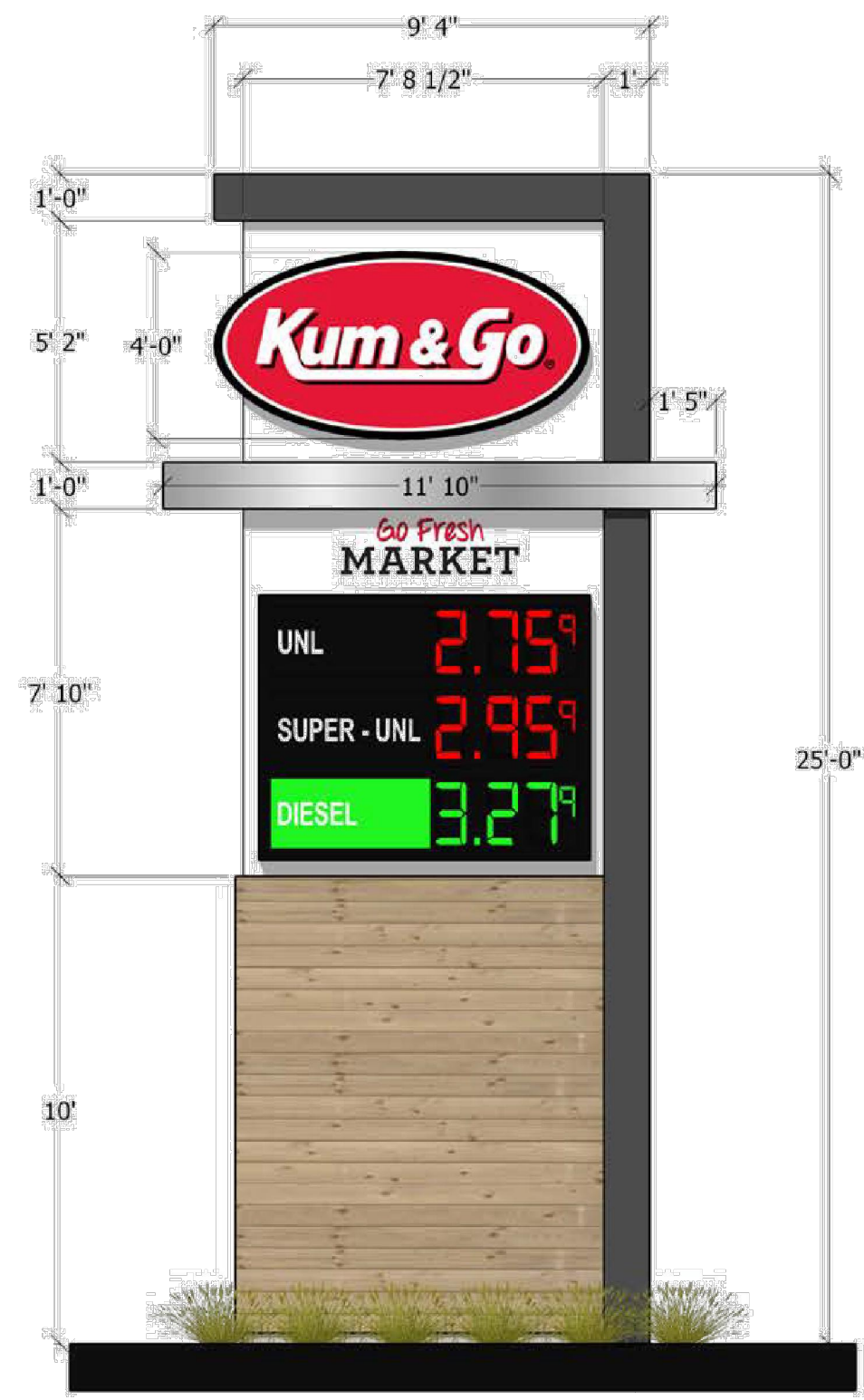
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DATE: 12-09-15

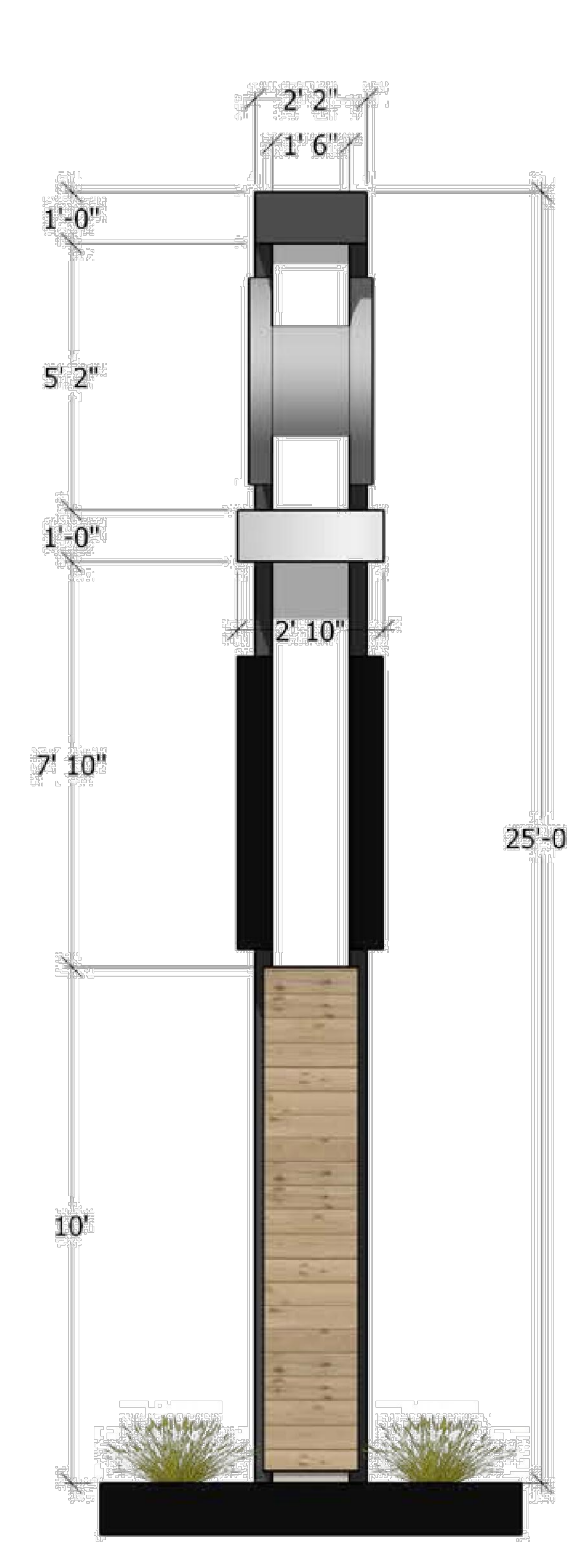
SHEET NUMBER:
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1 Signage Perspective
NTS



2 Front Elevation
NTS



3 Side Elevation
NTS

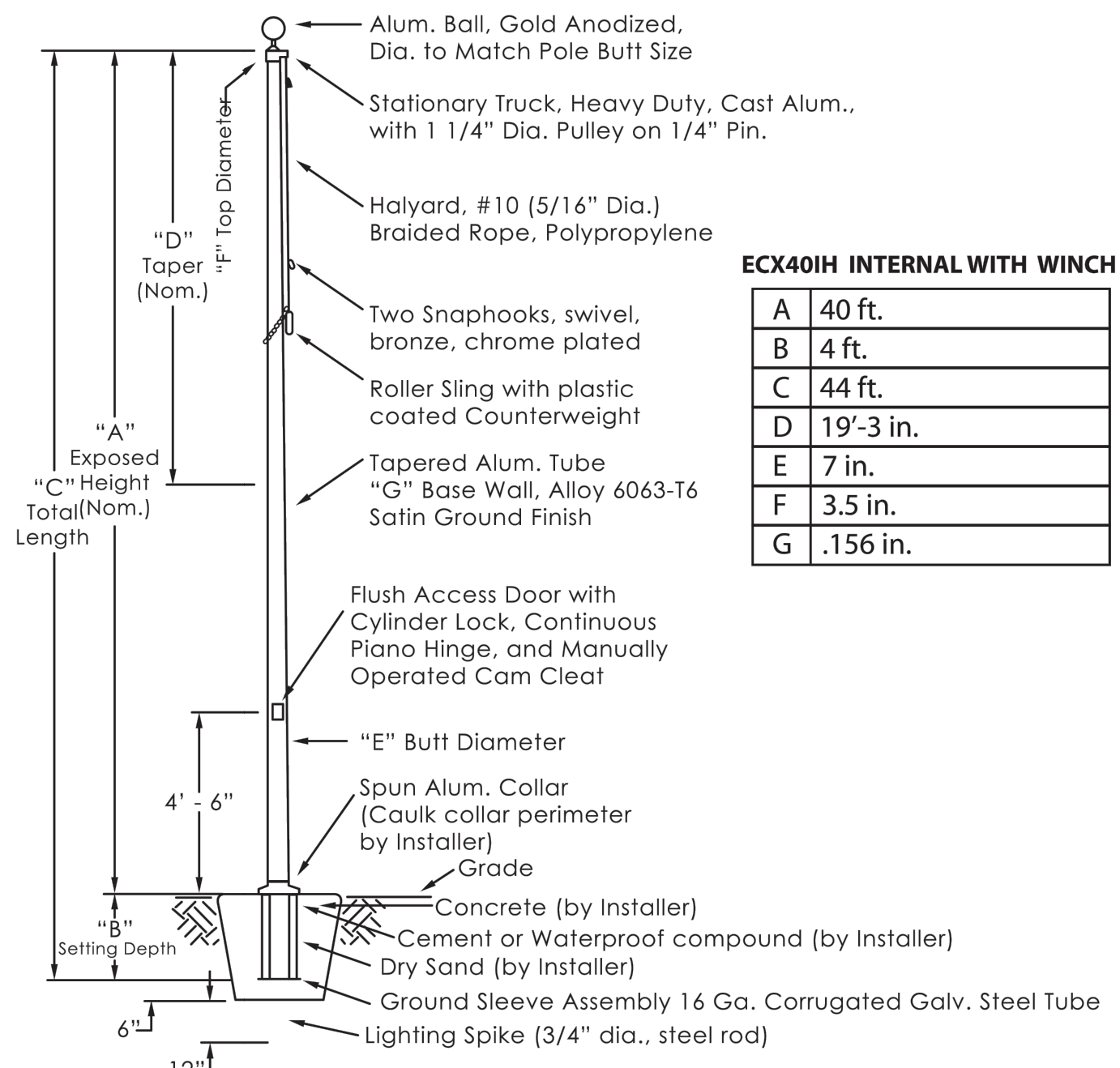
Kum & Go - 25'-0" Monument Sign Option
Prototype Design

DESIGN REPRESENTATION ONLY - NOT FOR CONSTRUCTION - The building images shown are a representation of the current design intent only. The building images may not reflect variations in color, tone, hue, line, shading, ambient light, materials, texture, contrast, font style, construction variations required by building codes or inspectors, material availability or final design detailing.

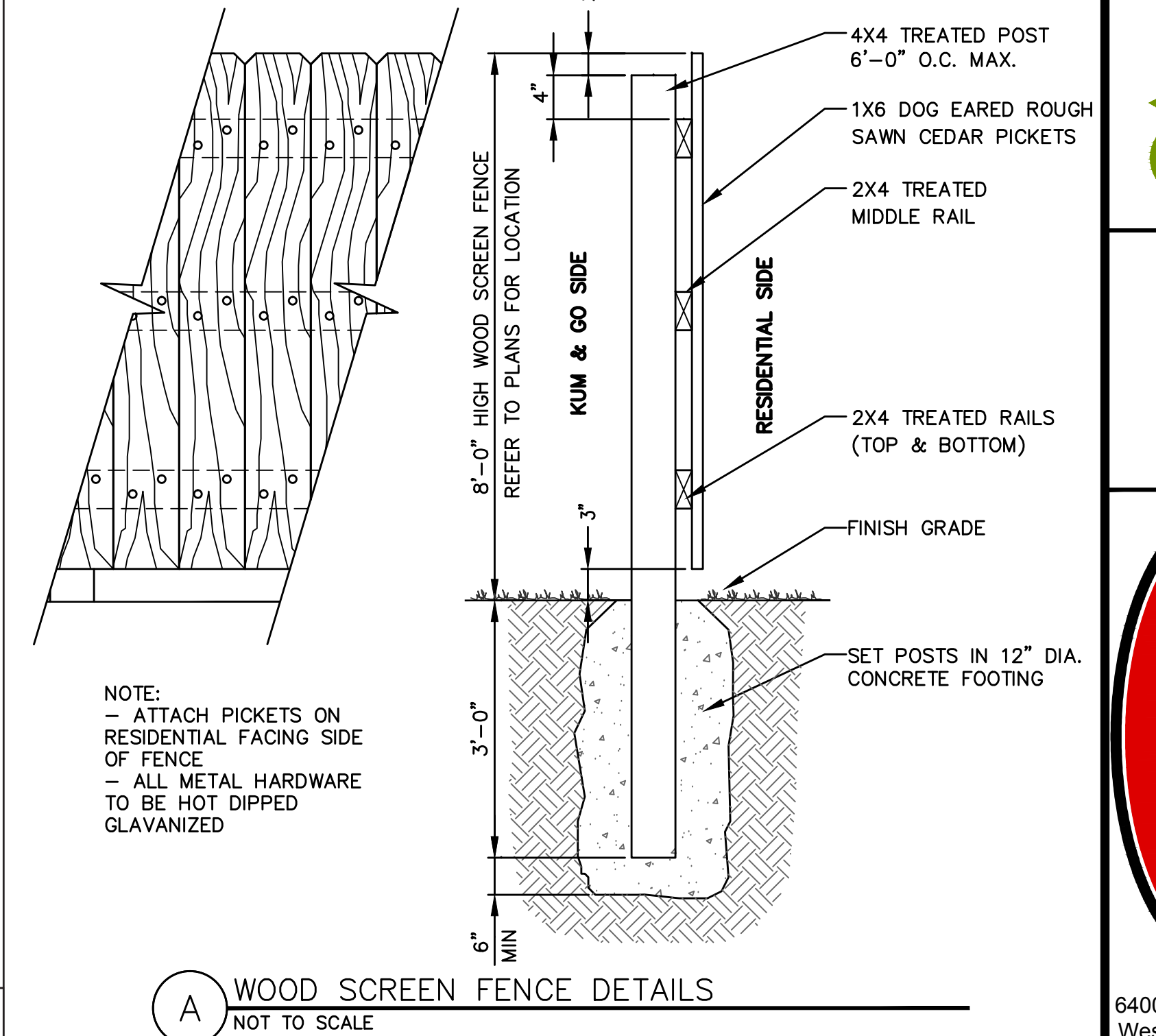
B|R|R
architecture

2
07/27/2015

NAGLE SIGNS INC. • 1-800-728-4604 •



CUSTOMER NAME: Kum & Go DATE: _____
POLE SECTIONS: 2 QUANTITY 1 FINISH Satin Finish



A WOOD SCREEN FENCE DETAILS
NOT TO SCALE

OLSSON ASSOCIATES
Olsson Associates, Inc., 4400 13th Ave. S.E., Suite 100, Grand Rapids, MI 49508
TEL: 616-941-9500
FAX: 616-941-9501
WWW.OLSSONASSOCIATES.COM



6400 Westown Parkway
West Des Moines, Iowa 50266
P: 515-226-0128
F: 515-223-9873

#837 - BROKEN ARROW, OK
24055 E. HIGHWAY 51
POLE SIGN, LOGO & FLAG POLE DETAILS

KG PROJECT TEAM
RDR: JWH
SDM: NDH
CPM: SDN

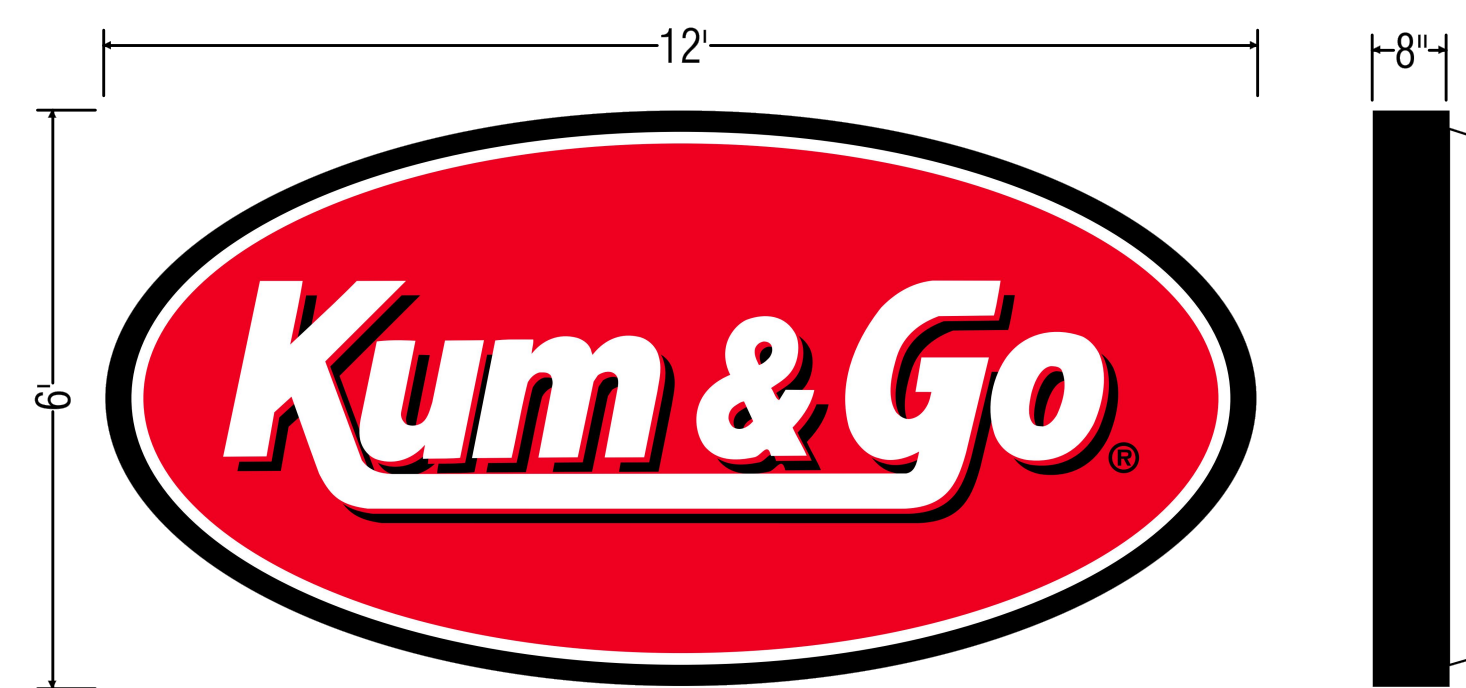
REVISION DESCRIPTION	DATE

REVISIONS

DATE: 12-09-15
SHEET NUMBER:
A1.4
13 OF 13

KUM & GO 12' OVAL

56.25 SQ. FT.



NAGLE SIGNS INC.
1020 WILBUR AVENUE
P.O. BOX 2098 WATERLOO, IA 50704
319-233-4604 • FAX: 319-233-7514
TOLL FREE: 800-728-4604



SCALE: 1/2"=1'0"
D:\KUMANDGO\NEW OVALS.F5

KUM & GO 4x11 GO FRESH



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SCALE: 1/2"=1'0"
D:\KUMANDGO\4X11 GO FRESH.F5

KUM & GO 3' X 6' OVAL



CABINET:
• FABRICATED ALUMINUM CABINET INTERNALLY LIGHTED WITH WHITE LED
EXTERIOR SKIN:
• PANFORMED CLEAR, 150 POLYCARBONATE FACE
• PAINTED FACES WITH EMBOSSED BORDER & LETTERING

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SCALE: 1"=1'0"
D:\KUMANDGO\3X6OVAL.F5