85619

06-12-2015 LETTING ITEM 158

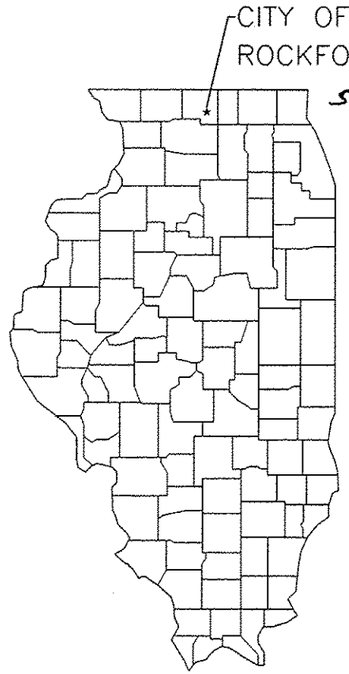
STATE OF ILLINOIS
ILLINOIS DEPARTMENT OF TRANSPORTATION

BOX CULVERT REPLACEMENT ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK

FOR

CITY OF ROCKFORD

FAP RTE 412 (ALPINE ROAD)
SECTION 14-00610-00-BR
PROJECT NO BRM-5099(114)
JOB NO C-92-046-15
CONTRACT NO. 85619



SHEET 1 OF 82

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ILLINOIS DEPT. OF TRANSPORTATION STANDARD DRAWINGS

STANDARD NO.	DESCRIPTION
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420401-11	BRIDGE APPROACH PAVEMENT CONNECTOR
424001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424026-01	ENTRANCE/ALLEY PEDESTRIAN CROSSINGS
515001-03	NAME PLATE FOR BRIDGES
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-10	STEEL PLATE BEAM GUARDRAIL
631031-13	TRAFFIC BARRIER TERMIAL TYPE 6
664001-02	CHAIN LINK FENCE
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' AWAY
701427-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER. FOR SPEEDS <= 40 MPH
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701611	URBAN HALF ROAD CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701801-05	SIDEWALK CORNER OR CROSSWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A 7 B METAL POSTS (FOR SIGNS AND MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

BEGIN STA. 8+00.00

LOCATION MAP

END STA. 12+85.00

N
W E
S
N.T.S.

NET LENGTH OF SECTION = 485 FEET (0.092 MILES)
FUNCTIONAL CLASS : PRINCIPAL ARTERIAL
2011 ADT = 27,600
TRUCKS = 5.4%

BEN M. BUSHMAN
062-062805
LICENSED PROFESSIONAL ENGINEER
OF
ILLINOIS

Ben Bushman 3/3/2015

BEN M. BUSHMAN
ILLINOIS LICENSED PROFESSIONAL
ENGINEER NO. 062-062805
LICENSE EXPIRES 11-30-15

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED March 4, 2015
CITY OF ROCKFORD - CITY ENGINEER

PASSED MARCH 6, 2015
DISTRICT 2 ENGINEER OF LOCAL ROADS AND STREETS

RELEASED FOR BID BASED ON LIMITED REVIEW MARCH 6, 2015
DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER

811 J.U.L.I.E. Know what's below. Call before you dig. OR CALL (800) 892-0123

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS IOWA WISCONSIN

ILLINOIS PROFESSIONAL DESIGN FIRM NUMBER: 184003525

ORIGINAL SET FOR PROJECT: 00-000	DATE CREATED: DATE
REVISIONS	
REV. NO.	DESCRIPTION / DATE

C:\Microstation\14\14-592\CADD\Plans\14-592-S-Cover.dgn
PLOT DATE: 3/3/2015

85619

GENERAL NOTES

IN THESE CONTRACT DOCUMENTS MENTION IS MADE OF THE "ENGINEER", WHICH SHALL MEAN FEHR GRAHAM OR THEIR DULY AUTHORIZED AGENT. IN THESE CONTRACT DOCUMENTS MENTION IS MADE OF THE "OWNER", WHICH SHALL MEAN CITY OF ROCKFORD, OR THEIR DULY AWARDED AGENT.

IN THE FOLLOWING, THE ILLINOIS DEPARTMENT OF TRANSPORTATION WILL BE REFERRED TO AS IDOT.

THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" PREPARED BY IDOT, CURRENT EDITION, "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS," CURRENT EDITION, AND THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", CURRENT EDITION. SIGN CONSTRUCTION AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", CURRENT EDITION.

WHEREVER IN THE PLANS OR SPECIFICATIONS THE TERM STANDARD SPECIFICATIONS IS USED, IT SHALL BE UNDERSTOOD BY THE CONTRACTOR TO MEAN THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS PREPARED BY THE DEPARTMENT OF TRANSPORTATION OF THE STATE OF ILLINOIS AND ADOPTED JANUARY 1, 2012.

ANY REFERENCE STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE DEPARTMENT AS SHOWN ON THE SCHEDULE OF STANDARD DRAWINGS.

GENERAL SAFETY PROVISION: TO PROVIDE DRIVERS WITH SAFE TRAVEL CONDITIONS DURING THE CONSTRUCTION PROJECT, AND TO PROVIDE SAFE WORKING CONDITIONS FOR ALL EMPLOYEES, THE FOLLOWING RULES, REGULATIONS, AND CONDITIONS STATED WILL PREVAIL FOR THE DURATION OF THIS CONTRACT. ANY EMPLOYEE OF THE CONTRACTOR OR HIS SUBCONTRACTORS WHO REFUSES TO COMPLY WITH THESE GENERAL SAFETY PROVISIONS SHALL BE REMOVED FROM THE JOB SITE IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS. THE CONTRACTOR AND ANY SUBCONTRACTORS RETAINED BY HIM SHALL COMPLY WITH THE STATE AND FEDERAL REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA), AS IT RELATES TO HIS OPERATIONS, REVISED AS OF JULY 1, 1987.

AS PART OF THE BIDDING PROCEDURE, THE CONTRACTOR SHALL VERIFY THAT THE QUANTITIES FOR PAY ITEMS, AS PRESENTED IN THESE PLAN DOCUMENTS, ARE SUBSTANTIALLY CORRECT. IF DISCREPANCIES ARE DETECTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE DISCREPANCY PRIOR TO THE BID DATE.

QUANTITIES SHOWN ARE ESTIMATES FOR INFORMATION ONLY. PAYMENT WILL BE BASED ON ACTUAL QUANTITIES MEASURED IN THE FIELD OR ON PAYMENT LIMIT DETAILS.

THE CONTRACTOR SHALL BE PAID FOR MATERIALS AND EQUIPMENT SUCCESSFULLY INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS MEASURED OR VERIFIED IN PLACE BY THE ENGINEER OR HIS AGENT.

IN CASE OF CONFLICT BETWEEN THE ABOVE MENTIONED SPECIFICATIONS, THE ENGINEER SHALL DETERMINE WHICH OF THE SPECIFICATIONS SHALL GOVERN. THE ENGINEER'S DECISION SHALL BE FINAL AND NO ADDITIONAL COMPENSATION SHALL BE AWARDED UNLESS APPROVED BY THE ENGINEER.

THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY THE CITY OF ROCKFORD. THE CONSTRUCTION DETAILS, AS PRESENTED ON THESE PLANS MUST BE FOLLOWED BY THE CONTRACTOR. IMPROVEMENT REPRESENTATIONS AS SHOWN ON THESE PLANS, ARE AS ACCURATE AS POSSIBLE FROM THE INFORMATION AVAILABLE. HOWEVER, SOME FIELD REVISIONS MAY BE REQUIRED TO ACCOMMODATE UNFORESEEN CIRCUMSTANCES – THE ENGINEER SHALL BE ADVISED OF ANY NECESSARY REVISIONS WITH SUFFICIENT LEAD TIME ALLOWED TO PROPERLY CONSIDER AND ACT UPON SAID REQUESTS. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED IN CONSTRUCTING THOSE IMPROVEMENTS AS DETAILED IN THIS ENGINEERING PLAN. EXTREME CAUTION MUST BE EXERCISED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. CONTRACTORS ARE ADVISED THAT ALL MUD AND DEBRIS MUST BE CLEARED FROM ROADWAYS.

THE OWNER AND/OR ENGINEER SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE OR REJECT THE WORKMANSHIP AND/OR MATERIALS WHICH GO TO MAKE UP IMPROVEMENTS AS DETAILED IN THESE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL NOTIFY CITY OF ROCKFORD AND THE ENGINEER AT LEAST 48 HOURS PRIOR TO PERFORMING ANY OF THE REQUIRED TESTS OR MATERIAL PLACEMENT, SO THAT A REPRESENTATIVE MAY BE PRESENT DURING ANY TESTING PROCEDURE OR MATERIAL PLACEMENT.

ANY AREAS DAMAGED OR DESTROYED DURING THE PROJECT AS A DIRECT OR INDIRECT RESULT OF CONTRACTOR OPERATIONS, SHALL BE RESTORED TO THAT CONDITION OR BETTER WHICH EXISTED PRIOR TO STARTING CONSTRUCTION. THE COST OF SAID RESTORATION OR REPAIR SHALL BE BORNE TOTALLY BY THE CONTRACTOR, WITH NO EXTRA COMPENSATION BEING AWARDED UNDER THIS CONTRACT. THE RESPONSIBILITY FOR THE REPAIR OR REPLACEMENT OF ANY UTILITY, STRUCTURE, LANDSCAPING, ETC. DAMAGED OR DESTROYED BY THE CONTRACTOR DURING MOBILIZATION OR CONSTRUCTION SHALL BE BORNE SOLELY BY THE CONTRACTOR, WITH NO EXPENSE BEING CHARGED TO THE ENGINEER OR OWNER. PRIOR TO ACCEPTANCE OF THIS REPAIR OR REPLACEMENT, THE CONTRACTOR SHALL PRESENT THE OWNER WITH A "SIGNOFF LETTER", SIGNED BY A RESPONSIBLE OFFICIAL OF THE OWNER OF THE DAMAGED UTILITY STATING THAT THE REPAIR OR REPLACEMENT IS ACCEPTABLE.

THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. HE WILL NOT BE ALLOWED TO BUILD FIRES ON THE SITE.

WHEN ARTIFICIAL LIGHTING IS UTILIZED DURING NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC, AS WELL AS ADJOINING RESIDENTIAL AREAS.

SCALE: DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.

THE ELEVATIONS SHOWN ON THE PLANS ARE FINISHED GRADES OF PROPOSED PAVEMENT, SURFACE COURSE, TOP BACK OF CURB OR DITCHES, UNLESS OTHERWISE INDICATED.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DRAINAGE FLOWS AT ALL TIMES DURING THE PERFORMANCE OF THE WORK. METHODS USED BY THE CONTRACTOR SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. COST OF MAINTAINING DRAINAGE FLOWS SHALL BE INCIDENTAL TO THE CONTRACT.

ANY FRAMES AND GRATES, SIGNS, FENCES, RETAINING WALLS, AND DELINEATORS DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED OR DISTURBED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS, MONUMENTS AND RIGHT-OF-WAY PINS UNTIL THE OWNER, AND AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS. THE TYPE OF REPLACEMENT OF MONUMENTS WILL BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES, AND FIELD VERIFY LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES, AND VERIFY ELEVATIONS WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.

THE CONTRACTOR SHALL REMOVE, STORE, AND RELOCATE TO THE SATISFACTION OF THE ENGINEER ALL EXISTING SIGNAGE IN ACCORDANCE WITH ARTICLE 107.25 OF THE IDOT STANDARD SPECIFICATIONS, AND CONSIDER THIS AS INCIDENTAL TO THE CONTRACT.

OUTSIDE THE EXISTING RIGHT-OF-WAY, THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATION NEAR ANY AND ALL EXISTING SIGNS OUTSIDE THE RIGHT-OF-WAY. ANY SIGNS REMOVED FOR CONSTRUCTION PURPOSES SHALL BE CAREFULLY REMOVED AND RE-ERECTED BY THE CONTRACTOR AT A LOCATION NEAREST TO THE ORIGINAL LOCATION, OR AT A LOCATION DETERMINED BY THE ENGINEER IN THE FIELD. REMOVAL AND RE-ERECTED SIGNS AND ANY DAMAGE DONE TO EXISTING SIGNS BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.

ALL ITEMS SHALL INCLUDE ALL THE NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. MATERIALS AND LABOR NOT SPECIFICALLY IDENTIFIED SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

CONTRACTOR SHALL CAREFULLY PROTECT ANY TREES OR SHRUBS NOT INCLUDED IN THE CONTRACT FOR REMOVAL. SNOW FENCE SHALL BE ERECTED TWO FEET FROM TREES AND SHRUBS TO REMAIN, THAT ARE IMMEDIATELY ADJACENT TO THE WORK, FOR PROTECTION DURING CLEARING AND CONSTRUCTION OPERATIONS. COST OF THIS WORK SHALL BE CONSIDERED AS INCLUDED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ANY TREES DISTURBED OR DAMAGED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

SHRUBS, BUSHES, AND STUMPS THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS SHALL BE REMOVED AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. COST OF REMOVAL OF SHRUBS, BUSHES, OR STUMPS SHALL BE INCLUDED IN THE ITEM EARTH EXCAVATION WITH NO ADDITIONAL COMPENSATION ALLOWED.

THE EXCAVATION FOR THIS PROJECT IS CLASSIFIED AS EARTH EXCAVATION IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND AS PROVIDED IN THE CONTRACT SPECIFICATIONS. THE EARTH EXCAVATION SHALL INCLUDE THE REMOVAL OF THE EARTH AND UNCLASSIFIED MATERIALS.

SEEDING SHALL BE DONE AT LOCATIONS SHOWN ON THE PLANS WHERE THE EXISTING EARTH HAS BEEN DISTURBED, AND AT LOCATIONS DIRECTED BY THE ENGINEER. ANY EXISTING AREAS OUTSIDE THE LIMITS OF CONSTRUCTION DAMAGED BY THE CONTRACTOR SHALL BE SEEDED AT HIS OWN EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

MODIFY SECTION 250.07 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION TO INCLUDE THE CONTRACTOR GUARANTEE A 75 PERCENT UNIFORM GROWTH OVER THE ENTIRE SEEDED AREA(S) AFTER ONE GROWING SEASON, WITH NO EXCEPTION TO THE TIMING OF THE SEEDING. AFTER ONE GROWING SEASON, AREAS NOT SUSTAINING 75 PERCENT UNIFORM GROWTH SHALL BE INTERSEEDED OR RESEEDED, AS DETERMINED BY THE ENGINEER AT NO ADDITIONAL COST TO THE CONTRACT.

SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: BINDER COURSE AND SURFACE COURSE. SHORT TERM PAVEMENT MARKING PLACED ON THE FINAL SURFACE SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE FINAL SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET.

ALL DRAINAGE STRUCTURES, STORM SEWERS AND PIPE CULVERTS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

TRAFFIC CONTROL AND PROTECTION

THE CONTRACTOR SHALL AT ALL TIMES PROVIDE PROTECTION FOR THE TRAFFIC AS DIRECTED BY THE ENGINEER. ANY DROP-OFF GREATER THAN 3 INCHES ADJACENT TO THE EDGE OF PAVEMENT SHALL BE PROTECTED WITH BARRICADES, AND SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

ALL TRAFFIC CONTROL DEVICES USED FOR THE MAINTENANCE OF TRAFFIC SHALL BE RETLECTORIZED PRIOR TO INSTALLATION AND CLEANED AS NECESSARY THROUGHOUT THE DURATION OF THE CONTRACT. ALL SIGNS SHALL BE FURNISHED, INSTALLED AND MAINTAINED BY THE CONTRACTOR.

TRAFFIC CONDITIONS, ACCIDENTS, AND OTHER UNFORESEEN CONDITIONS MAY REQUIRE THE ENGINEER TO MODIFY THE LOCATION OF THE TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND WITHIN 30 MINUTES FROM THE TIME OF NOTIFICATION BY THE ENGINEER TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION, IMPROVEMENT OR MODIFICATION OF THE MAINTENANCE OF TRAFFIC CONTROL DEVICES. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF THE ADJACENT TRAVELED LANE SURFACE. COST INCIDENTAL TO THE PROJECT.

THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL TRAFFIC CONTROL ITEMS NECESSARY FOR THE CONSTRUCTION OF ITEMS WITHIN THE ROAD RIGHT-OF-WAY. ALL WORK PERFORMED SHALL HAVE TRAFFIC CONTROL IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS" (LATEST EDITION).

UTILITIES

THE CONTRACTOR MUST VERIFY AND LOCATE ALL EXISTING UTILITIES ON OR ADJACENT TO THE SITE. PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES, CONTACT J.U.L.I.E. AT 1-800-892-0123 (OR 811) FOR EXACT FIELD LOCATION OF UTILITIES. DAMAGE, AND THE COST THEREOF, TO ANY AND ALL UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR, ANY AND ALL EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE. THE OWNER ENGINEER AND SURVEYOR ASSUME NO RESPONSIBILITY FOR THE LOCATION OF THE EXISTING UTILITIES SHOWN HEREON.

IF THERE ARE ANY UTILITIES WHICH ARE NOT MEMBERS OF THE J.U.L.I.E. SYSTEM, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THIS AND REQUESTING SAID UTILITIES TO FIELD VERIFY AND MARK PERTINENT UTILITY LOCATIONS.

UTILITIES SHOWN ON THE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND NO GUARANTEE OF THEIR ACCURACY IS MADE OR INFERRED. THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE DRAWINGS REPRESENT DATA RECEIVED FROM VARIOUS SOURCES. IT IS NOT GUARANTEED TO BE CORRECT OR ALL-INCLUSIVE. THE CONTRACTOR SHALL CONDUCT HIS OWN INVESTIGATION INTO THE LOCATION, SIZE, DEPTH AND NATURE OF ANY AND ALL EXISTING UTILITIES THAT MAY INTERFERE WITH THE WORK UNDER THIS CONTRACT. ANY EXISTING UTILITIES THAT ARE TO REMAIN IN SERVICE SHALL BE FULLY PROTECTED BY THE CONTRACTOR AND ANY DAMAGE CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER OR THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ANY AND ALL UTILITY COMPANIES REGARDING ADJUSTMENTS NECESSARY. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE AND CONSIDERED INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND, OVERHEAD, OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OR THE OWNER OR REPLACED. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR IS REQUIRED TO PROTECT THE VARIOUS BURIED UTILITIES THAT ARE CROSSED (I.E., WATER, SANITARY, STORM, GAS, TELEPHONE, ELECTRIC) DURING CONSTRUCTION. ANY DAMAGE THAT OCCURS TO THE VARIOUS BURIED UTILITIES DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

ANY DAMAGE, DIRECT OR INDIRECT, TO EXISTING AREA STRUCTURES, UTILITIES, PAVEMENTS, ETC. AND NOT CALLED OUT SPECIFICALLY IN THE PLANS SHALL BE REPAIRED OR REPLACED WITH EQUALS BY CONTRACTOR WITHOUT COST TO THE OWNER.

ALL STORM SEWERS DAMAGED OR ENCOUNTERED DURING THE CONSTRUCTION ACTIVITIES SHALL BE REPAIRED, REPLACED AND/OR CONNECTED IMMEDIATELY BY THE CONTRACTOR. COST FOR SAID REPAIRS, REPLACEMENT, AND/OR CONNECTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY FIELD TILES WHICH COMMENCE ON THE SUBJECT PROPERTY MAY BE REMOVED AND DO NOT NEED TO BE REPAIRED. IF A FIELD TILE SERVICES AN UPSTREAM OFF SITE PROPERTY, THE FIELD TILE MUST BE REPAIRED, REPLACED, AND/OR CONNECTED IMMEDIATELY BY CONTRACTOR. THE COST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES AT THE TIME OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL COOPERATE WITH THOSE ORGANIZATIONS WHILE THEY PERFORM THEIR WORK.

DURING CONSTRUCTION THE CONTRACTOR MAY ENCOUNTER VARIOUS TYPES OF UNDERGROUND UTILITIES THAT MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL COOPERATE WITH THE ENGINEER AND THE OWNER OF THE UTILITY WHILE THE UTILITY COMPANY ADJUST THEIR FACILITIES IF NECESSARY. IF IT IS DETERMINED THAT THE UTILITY HAS BEEN ABANDONED, THE CONTRACTOR WILL BE DIRECTED TO REMOVE THE UTILITY LINES THAT CONFLICT WITH HIS WORK AND CAP OR PLUG THE LINES AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY AND WILL BE CONSIDERED AS INCLUDED.

THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION OPERATIONS.

EXCAVATION/EARTHWORK

THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATION NEAR ANY AND ALL EXISTING ITEMS WHICH ARE NOT INDICATED TO BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.

WHENEVER THE CONTRACTOR WORKS NEAR EXISTING FACILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS DURING TRENCHING OPERATIONS, HE WILL BE REQUIRED TO HAND TRENCH IN THAT AREA IN ORDER NOT TO DAMAGE THESE FACILITIES. PUSH HOLES AND SEARCH HOLES THAT ARE DUG BY THE CONTRACTOR SHALL BE BACKFILLED BY TAMPING THE EXCAVATED MATERIAL BACK IN PLACE TO KEEP SETTLEMENT TO A MINIMUM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

PRIOR TO STARTING UTILITY TRENCHING, THE CONTRACTOR SHALL STRIP THE TRENCH LOCATION OF TOPSOIL. THIS MATERIAL SHALL BE STOCKPILED. THEN IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RESPREAD THIS TOPSOIL MATERIAL OVER THE EXCAVATED TRENCH. THE MATERIAL SHALL THEN BE COMPACTED TO A MINIMAL DEPTH OF 4" AND FINE GRADED IN A MANNER ACCEPTABLE TO THE ENGINEER. TOPSOIL STRIP STOCKPILE, AND RESPREAD SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

ALL EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE. COST SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL ENSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING, OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUIRED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF.

GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES AND OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THESE ITEMS. IT IS THE INTENT THAT ITEMS THAT DO NOT NEED TO BE DISTURBED BY THE CONSTRUCTION SHALL BE PRESERVED. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.

ALL TRENCHES BELOW OR WITHIN TWO FEET OF THE PROPOSED PAVEMENT, OR DRIVEWAY SHALL BE BACKFILLED WITH TRENCH BACKFILL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL DEBRIS AND EXCESS MATERIAL (BROKEN CONCRETE, PIPES, WASTE EXCAVATION, ETC.) SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT.

HMA MIXTURE REQUIREMENTS:

LOCATION	ALPINE ROAD	ALPINE ROAD
MIXTURE USE(S):	SURFACE COURSE	BINDER COURSE
AC/PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @ N_{DES}= 70	4.0% @ N_{DES}= 70
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5	IL-19.0
FRICTION AGGREGATE:	MIX D	N/A
MIXTURE WEIGHT:	112	112
QUALITY MANAGEMENT PROGRAM:	QC/QA	QC/QA
TRAFFIC FACTOR:	1.87	1.87

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 3/3/2015
SCALE: N/A

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING: GENERAL NOTES

C:\Microstation\14\14-592\CADD\Plans\14-592-S-General Notes - 2.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 02 of 82

PLOT DATE: 3/3/2015

85619

ABBREVIATIONS

<	ANGLE
ABC	AGGREGATE BASE COURSE
AC	ACRE(S)
ACI	AMERICAN CONCRETE INSTITUTE
AGR	AGGREGATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ARCH	ARCHITECT
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
B	BALL VALVE
BFP	BACKFLOW PREVENTER
BIT	BITUMINOUS
BLDG	BUILDING
BLK	BLOCKING
BM	BENCHMARK
BOT	BOTTOM
BSMT	BASEMENT
BV	BUTTERFLY VALVE
B-B	BACK-TO-BACK OF CURB DIMENSION
CL or ℄	CENTERLINE
C TO C	CENTER TO CENTER
C & G	CURB AND GUTTER
CF	CUBIC FEET
CHD	CHORD LENGTH
CI	CAST IRON PIPE
CHK	CHECK VALVE
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CTY	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
C-B	CENTERLINE TO BACK OF CURB DIMENSION
COORD	COORDINATE
CU	COPPER PIPING
CTRS	CENTERS
CY	CUBIC YARDS
CS	CORPORATION STOP
D	DEGREE OF CURVE
DEP	DEPRESSED
DET	DETAIL
DIAG	DIAGONAL
DIM	DIMENSION
DI	DUCTILE IRON PIPE
DN	DOWN
DNSTR	DOWNSTREAM
DP	DRAINAGE PIPE/STORM PIPE
DWG	DRAWING
E	EAST
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
EW	EACH WAY
EXP	EXPANSION
EX, EXIST	EXISTING
EXT	EXTERIOR
E =	EXTERNAL DISTANCE
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIELD ENTRANCE
FFL	FINISH FLOOR LEVEL
FIL	FILLET
FIN	FINISH
FL	FLOW LINE
FLR	FLOOR
FM	FORCE MAIN
FND	FOUND
FRMG	FRAMING
FTG	FOOTING
F-F	FACE TO FACE
GA	GAUGE
GI	GALVANIZED IRON PIPE
GRD	GRADE
GRS	GRATING SUPPORT
GRT	GROUT
GV	GAS VALVE
GYP	GYPSUM
HSE	HOUSE
HC	HORIZONTAL CURVE
HMA	HOT MIX ASPHALT
HNGR	HANGER
HORIZ	HORIZONTAL
H.P.	HIGH POINT
HW	HOT WATER
HWH	HOT WATER HEATER
Δ =	CENTRAL ANGLE
I	MOMENT OF INERTIA
ID	INSIDE DIAMETER
INT	INTERIOR
INV	INVERT ELEVATION; BASED ON BENCH MARK DATUM
IP	IRON PIPE
JST	JOIST
L	LENGTH OF CURVE
LAT	LATERAL
LAV	LAVATORY
LF	LINEAL FEET
L.P.	LOW POINT
LT	LEFT OF SURVEY BASE LINE
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MJ	MECHANICAL JOINT
MTL	METAL
N	NORTH
No. OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OO	OUTSIDE TO OUTSIDE
OPNG	OPENING
OPP	OPPOSITE
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE
PCF	POUNDS PER CUBIC FOOT
PDP	PERFORATED DRAIN PIPE
PE	POLYETHYLENE PIPE
PI	POINT OF INTERSECTION
PL	PLATE
PLG	PLUG VALVE
PLP	POLYPROPYLENE PIPE
PLYWD	PLYWOOD
PM	PRINCIPAL MERIDIAN
PR	PRESSURE REGULATORS
PRC	POINT OF REVERSE CURVATURE
PRESS	PRESSURE
PR, PROP	PROPOSED
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PIPE SLEEVE
PT	POINT OF TANGENCY
PLG	PLUG VALVE
PVC	POLYVINYL CHLORIDE (PLASTIC) PIPE
R	RADIUS
RDCR	REDUCER
RCCP	REINFORCED CONCRETE CYLINDER PIPE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
REINF	REINFORCING
REQD	REQUIRED
ROW	RIGHT OF WAY
RFTR	RAFTER
RND	ROUND
RR	RAILROAD
RRSP	RAILROAD SPIKE
RT	RIGHT
R&R	REMOVE AND REPLACE
S	SOUTH
SB	STREAM BED
SCHED	SCHEDULE
SEC	SECTION
SF	SQUARE FEET
SHR	SHOWER
SHT	SHEET
SHTG	SHEATHING
SP	SANITARY PIPE
SPA	SPACING OR SPACES
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SERVICE
STA	STATION
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SW	SIDEWALK
SY	SQUARE YARDS
SYM	SYMMETRICAL
TAN	TANGENT LENGTH
TBC	TOP BACK OF CURB
TBM	TEMPORARY BENCH MARK; BASED ON BENCHMARK DATUM
TD	TILE DRAIN
THK	THICK
TR	TREAD
TY	TYPE
TYP	TYPICAL
UP	UTILITY POLE
UPSTR	UPSTREAM
UR	URINAL
USGS	US GEOLOGICAL SURVEY
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VOL	VOLUME
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPT	VERTICAL POINT OF TANGENCY
W	WEST
WC	WATER CLOSET
WF	WIDE FLANGE
WM	WATER MAIN
WMQ	WATER MAIN QUALITY
WV	WATER VALVE
WGT	WEIGHT
WP	WEATHER PROOF
WS	WATER SERVICE
WWF	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
XP	EXPLOSION PROOF

HATCH PATTERNS

- EARTH – FILL
- EARTH – UNDISTURBED
- ROCK (GEOLOGICAL)
- STONE OR RIP RAP
- GRAVEL
- CONCRETE
- CONCRETE BLOCK
- CMU
- ASPHALT PAVEMENT
- BRICK
- STEEL
- INSULATION (LOOSE/ BATT)
- INSULATION (RIGID)
- WOOD (ROUGH)
- WOOD (BLOCKING)
- WOOD (FINISH)
- DETECTABLE WARNING

SYMBOLS

EXISTING	CIVIL	PROPOSED
EXISTING R.O.W.	RIGHT-OF-WAY LINE	PROPOSED R.O.W.
	PROPERTY LINE	
	CENTERLINE	
	SETBACK LINE	
	EASEMENT LINE	
	SECTION LINE	
	SECTION CORNER	
N 1000.00 E 1000.00	COORDINATE POINT ON GRID SYSTEM	
●FND	FOUND OR SET PROPERTY PIN	○ SET
	RIGHT-OF-WAY MARKER	
	BENCHMARK	
600	CONTOUR LINE	600
000.00FG	SPOT ELEVATION (AT)	000.00FG
x x	FENCE LINE	x x
	SILT FENCE LINE	
	CURB AND GUTTER	
	TIP OUT CURB AND GUTTER	
	SAWCUT, LIMITS OF PAVEMENT REMOVAL & REPLACEMENT	
x"	DECIDUOUS TREE W/ SIZE	x"
x"	CONIFEROUS TREE W/ SIZE	x"
x"	TREE STUMP	
	HEDGEROW	
	BUSH OR SHRUB	
	TREE LINE	
CL	CONSTRUCTION LIMIT LINE	CL
	SIGN (MULTIPLE POST, SINGLE POST)	
	SIGN (PYLON)	
	GUARD RAIL	
	RAILROAD TRACKS	
	BUILDING	
	MAILBOX	B

EXISTING	MISC	PROPOSED
S.B. #XX	SOIL BORING LOCATION AND NUMBER	S.B. #XX
MW #XX	MONITORING WELL	MW #XX
	REVISION NUMBER	
	OUTLINE OF DETAILED AREA	
	SECTION NUMBER / SHEET WHERE SHOWN	

EXISTING	SANITARY SEWER	PROPOSED
S S	SANITARY SEWER	S S
	SANITARY SEWER SERVICE	
FMS	SANITARY SEWER FORCE MAIN	FMS
	SANITARY CLEANOUT	CO
	SANITARY MANHOLE	
	WYE FITTING	

EXISTING	WATER	PROPOSED
	WATER SERVICE	W W
W W	WATER PIPE	W W
	FIRE HYDRANT	
	YARD HYDRANT	
	WATER VALVE WITH BOX	
	CURB STOP W/CURB BOX	
	REDUCER	
W	WATER VALVE VAULT	W
	11.25° BEND	
	22.50° BEND	
	45° BEND	
	90° BEND	
	TEE	
	CAP	
M	WATER METER	M
	SPRINKLER HEAD	

EXISTING	STORM SEWER	PROPOSED
ST ST ST	STORM SEWER	ST ST ST
	DITCH LINE (PAVED)	
	DITCH LINE (UNPAVED)	
	STORM MANHOLE	
	CATCH BASIN	
	STORM SEWER INLET	
	STORM SEWER INLET – BEHIND CURB	
	DOWNSPOUT	
X" TYPE	CULVERT AND SIZE	X" TYPE
	RCCP OR RCP EQRS (RCAP) END SECTION	
	METAL OR HDPE END SECTION	
	FLOW DIRECTION	
	INLET PROTECTION	

EXISTING	EROSION CONTROL	PROPOSED
	EROSION CONTROL BLANKET	
	SEEDING, CLASS 2	
	UNDISTURBED AREA	
	STABILIZED CONSTRUCTION ENTRANCE	
	PERIMETER EROSION BARRIER	
	INLET PROTECTION	
	TEMPORARY SEDIMENT TRAP	
	CULVERT INLET PROTECTION	
	ROCK OUTLET PROTECTION	
	ROCK CHECK DAM – COURSE AGGREGATE	
	ROCK CHECK DAM – RIP RAP	
	TEMPORARY DITCH CHECK	

EXISTING	UTILITY	PROPOSED
FO FO	FIBER OPTIC LINE	FO FO
TV TV	UNDERGROUND TV CABLE	TV TV
	CABLE TV RISER PEDESTAL	
OU	OVERHEAD UTILITY	OU
UE UE	UNDERGROUND ELECTRIC	UE UE
	ELECTRIC RISER PEDESTAL	
E	ELECTRIC MANHOLE	
T T	UNDERGROUND TELEPHONE	T T
	TELEPHONE RISER PEDESTAL	
	UTILITY POLE	
	UTILITY POLE W/ METER	
	UTILITY POLE W/ TRANSFORMER	
	UTILITY POLE W/ LIGHT	
	UTILITY POLE WITH GUY WIRE AND ANCHOR	
	LIGHT (MAST MOUNTED)	
	LIGHT POLE (SINGLE FIXTURE)	
	YARD LIGHT	
G G	GAS MAIN	G G
M	GAS METER	M
	GAS VALVE	

EXISTING	TRAFFIC RELATED	PROPOSED
	CONTROLLER	
	MAST ARM ASSEMBLY AND POLE	
	SIGNAL HEAD AND POST	
	SIGNAL HEAD	
	PEDESTRIAN HEAD	
	PEDESTRIAN PUSH-BUTTON	
	HAND HOLE	
	DOUBLE HAND HOLE	
	HAND HOLE OR JUNCTION BOX	
	HEAVY-DUTY HAND HOLE	
(S – P)	EXISTING CONDUIT (LENGTH AND SIZE) PROP. GALVANIZED STEEL OR PVC CONDUIT UPPER MATERIAL INDICATES LENGTH "T" INDICATES CONDUIT IN TRENCH "P" INDICATED CONDUIT PUSHED LOWER NUMERAL INDICATES SIZE AND TYPE	2" GS-PVC
	LUMINAIRE	
	ARROW – THROUGH, TURN LEFT	
	ARROW – THROUGH	
	ARROW – TURN LEFT	
	ARROW – TURN RIGHT	
	ONE DIRECTION TURN ONLY	
	HANDICAPPED PARKING STALL	
	TRAFFIC DETECTOR LOOP	
	TRAFFIC CONTROL BOX	

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 3/3/2015
SCALE: N/A

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
LEGENDS

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Legends.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
03 of 82

PLOT DATE: 3/3/2015

85619

SUMMARY OF QUANTITIES - CONSTRUCTION TYPE CODE: 0011

S.P.	Code Number	Item	Unit of Measure	Quantity
	20100500	TREE REMOVAL, ACRES	ACRE	0.2
	20200100	EARTH EXCAVATION	CU YD	280.0
	20201200	REMOVAL & DISPOSAL OF UNSUITABLE MATL	CU YD	28.0
	21101600	TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH	SQ YD	29
	25000210	SEEDING, CLASS 2A	ACRE	0.3
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	27
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	27
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	27
	25100115	MULCH METHOD 2	ACRE	0.3
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	34
	28000400	PERIMETER EROSION BARRIER	FOOT	362
	28000500	INLET AND PIPE PROTECTION	EACH	2
	28100709	STONE DUMPED RIPRAP, CLASS A5	SQ YD	143
	28200200	FILTER FABRIC	SQ YD	143
	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	2,926
	40600990	TEMPORARY RAMP	SQ YD	131
	40603085	HMA BINDER COURSE, IL-19.0, N70	TON	416
	40603340	HMA SURFACE COURSE, MIX "D", N70	TON	346
	42001300	PROTECTIVE COAT	SQ YD	507
	42001420	BRIDGE APPR PAVT CONNECTOR (PCC)	SQ YD	153
	42300200	PCC DRIVEWAY PAVEMENT, 6 INCH	SQ YD	142
*	42400300	PCC SIDEWALK, 6 INCH	SQ FT	2,466
	42400800	DETECTABLE WARNINGS	SQ FT	57
	44000100	PAVEMENT REMOVAL	SQ YD	625
	44000157	HMA SURFACE REMOVAL, 2"	SQ YD	2,137
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	147
	44000300	CURB REMOVAL	FOOT	79
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	837
	44000600	SIDEWALK REMOVAL	SQ FT	2,505
*	50100300	REMOVAL OF EXISTING STRUCTURE, NO. 1	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	354.0
	50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	20.0
	50200450	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR STRUCTURES	CU YD	23.0
	50300225	CONCRETE STRUCTURES	CU YD	145.8
	50300255	CONCRETE SUPERSTRUCTURES	CU YD	147.6
*	50600200	PAINTING STEEL RAILING	FOOT	123
	50800105	REINFORCEMENT BARS	POUND	62,220
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	41,510
	50800515	BAR SPLICERS	EACH	283
	50901720	BICYCLE RAILING	FOOT	94
	50901750	PARAPET RAILING	FOOT	29
	51500100	NAME PLATES	EACH	1
	54003000	CONCRETE BOX CULVERTS	CU YD	266.1
	54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	1

* SEE SPECIAL PROVISIONS

	Code Number	Item	Unit of Measure	Quantity
	550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	28
	550A0410	STORM SEWERS, CLASS A, TYPE 2 24"	FOOT	20
	55101200	STORM SEWER REMOVAL, 24"	FOOT	20
	55101600	STORM SEWER REMOVAL, 36"	FOOT	20
*	56103300	DUCTILE IRON WATER MAIN, 12"	FOOT	142
*	56105750	BUTTERFLY VALVES, 12"	EACH	1
*	56109424	DIP WATER MAIN FITTINGS, 12", 45 DEGREE BEND	EACH	4
*	X5610712	WATER MAIN REMOVAL, 12"	FOOT	124
*	X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	334
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	104
	59300100	CONTROLLED LOW STRENGTH MATERIAL	CU YD	14.5
	60235700	INLETS, TYPE A, TYPE 3 FRAME AND GRATE	EACH	2
	60255500	MANHOLES TO BE ADJUSTED	EACH	2
*	X6061005	CONCRETE CURB, TYPE B (SPECIAL)	FOOT	29
*	60604400	COMB. CONC. CURB & GUTTER, TYPE B-6.18	FOOT	912
*	X6064200	COMBINATION CURB & GUTTER, TYPE B-6.12 (SPECIAL)	FOOT	325
	63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	225
	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	1
	63200310	GUARDRAIL REMOVAL	FOOT	260
	66400105	CHAIN LINK FENCE, 4'	FOOT	203
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6
	67100100	MOBILIZATION	L SUM	1
*	X7010216	TRAFFIC CONTROL & PROTECTION, (SPL)	L SUM	1
*	70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	10,210
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	3,403
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	536
	70400200	RELOCATE TEMP. CONCRETE BARRIER	FOOT	368
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
	70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
	78000100	THERMOPL. PAVT MARKING - LETT & SYMB	SQ FT	135
	78000200	THERMOPL. PAVT MARKING - LINE 4"	FOOT	5,386
	78000400	THERMOPL. PAVT MARKING - LINE 6"	FOOT	123
	78000600	THERMOPL. PAVT MARKING - LINE 12"	FOOT	135
	78000650	THERMOPL. PAVT MARKING - LINE 24"	FOOT	75
	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	17
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	2,277
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	17
	81200250	CONDUIT EMBEDDED IN STRUCTURE, 3" DIA., PVC	FOOT	29
*	X0327172	REMOVE AND REPLACE SIGN AND SUPPORTS	EACH	1
*	Z0022800	FENCE REMOVAL	FOOT	203
*	Z0024476	FLEXIBLE DELINEATOR MAINTENANCE	EACH	20
*	Z0054500	ROCK FILL	TON	210
*	Z0056678	STORM SEWERS, TYPE 2, WATER MAIN QUALITY PIPE, 36"	FOOT	20
*	Z0062456	TEMPORARY PAVEMENT	SQ YD	531
*	Z0067900	STEEL CASING, 24"	FOOT	49
*	Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	200

* SEE SPECIAL PROVISIONS

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ILLINOIS
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OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CD
DATE: 4/23/2015
SCALE: N/A

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
SUMMARY OF QUANTITIES

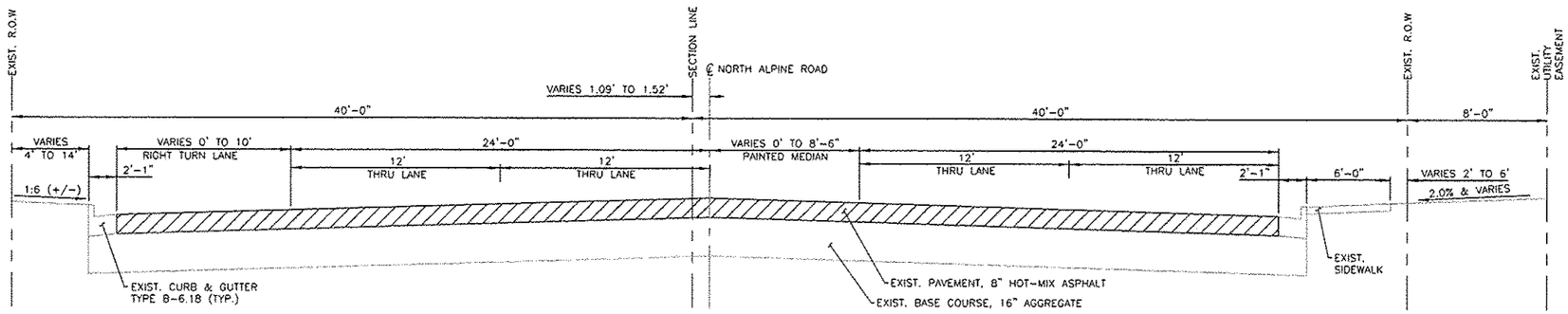
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Summary of quantities.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 04 of 82

PLOT DATE: 4/23/2015

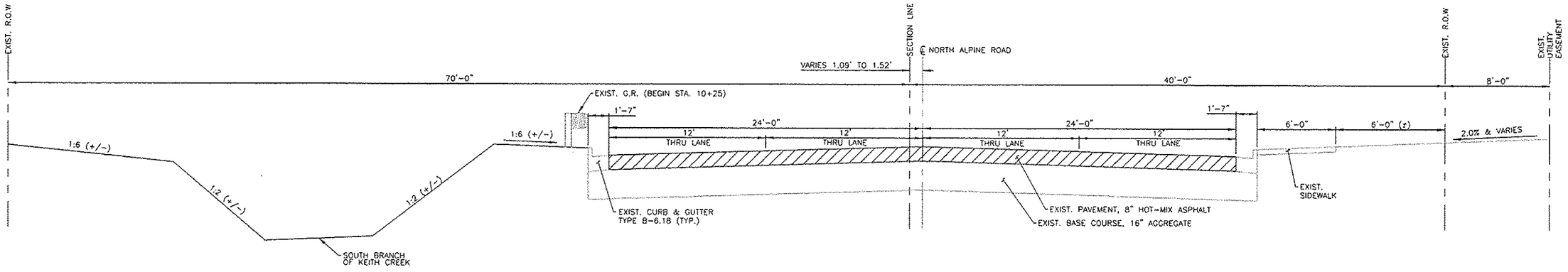
85619



EXISTING TYPICAL SECTION NORTH ALPINE ROAD

STATION 8+00 TO 9+60

N.T.S.



EXISTING TYPICAL SECTION NORTH ALPINE ROAD

STATION 9+60 TO 12+85

N.T.S.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
EXISTING TYPICAL SECTIONS

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JOB NUMBER:
14-592

SHEET NUMBER:
05 of 82

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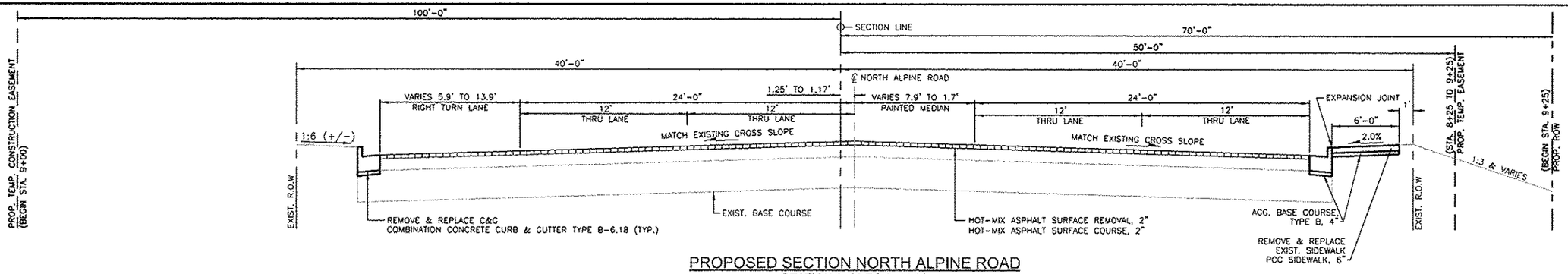
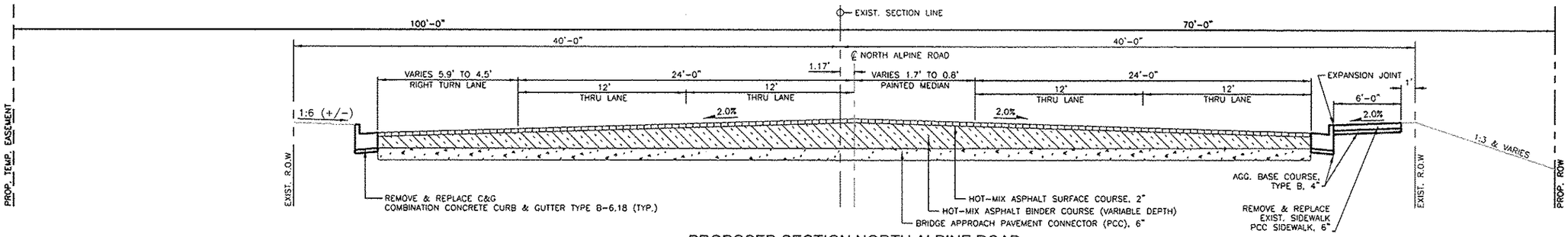
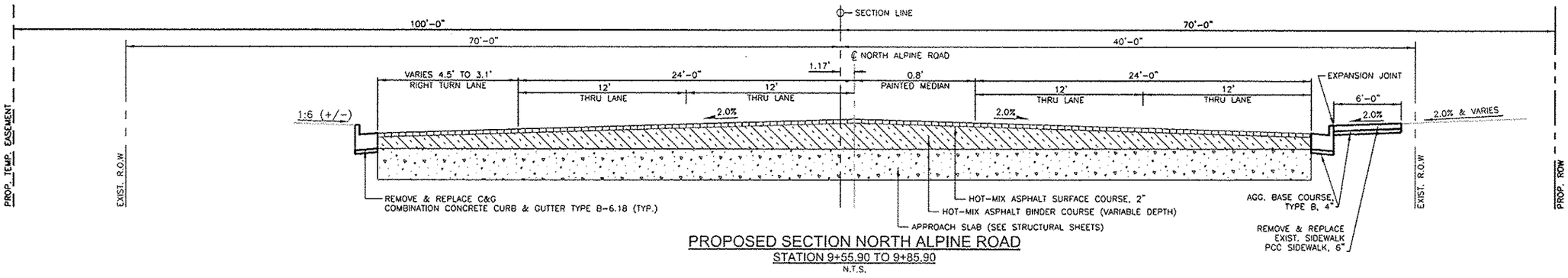


PROPOSED SECTION NORTH ALPINE ROAD
STATION 8+00 TO 9+41.82
N.T.S.



PROPOSED SECTION NORTH ALPINE ROAD
STATION 9+41.82 TO 9+55.90
N.T.S.



PROPOSED SECTION NORTH ALPINE ROAD
STATION 9+55.90 TO 9+85.90
N.T.S.

FEHR GRAHAM
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ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
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PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
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ROCKFORD, IL 61104

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ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
PROPOSED TYPICAL SECTIONS
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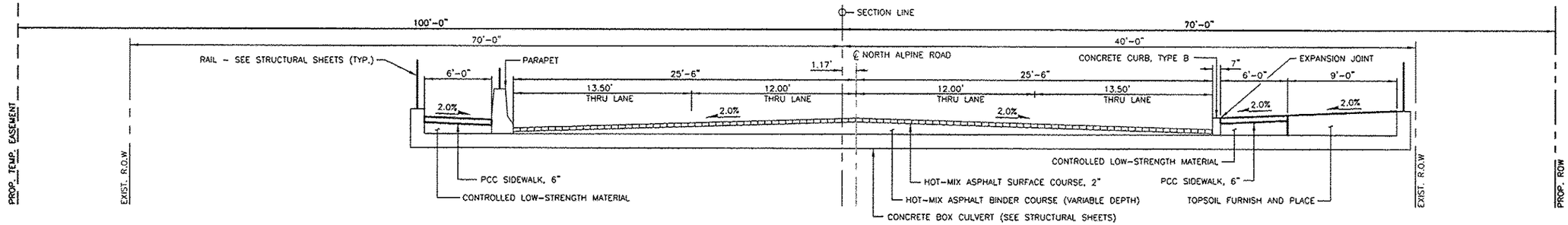
JOB NUMBER:
14-592

SHEET NUMBER:
06 of 82

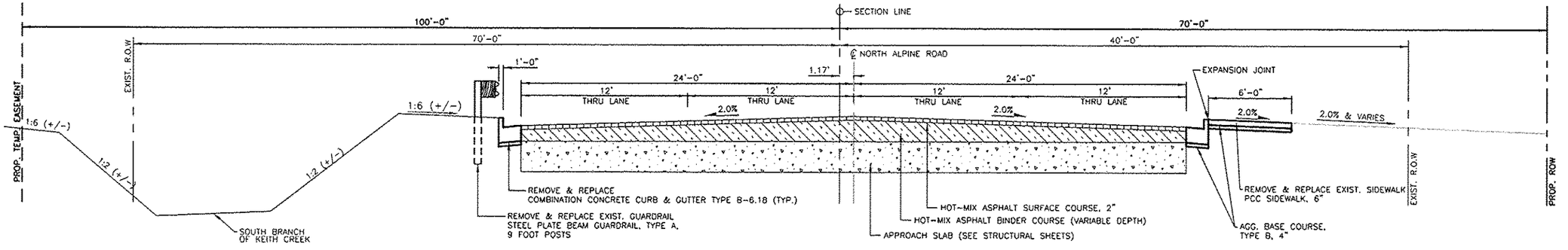
85619



PROPOSED SECTION NORTH ALPINE ROAD

STATION 9+85.90 TO 10+14.10

N.T.S.



PROPOSED SECTION NORTH ALPINE ROAD

STATION 10+14.10 TO 10+44.10

N.T.S.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
PROPOSED TYPICAL SECTIONS

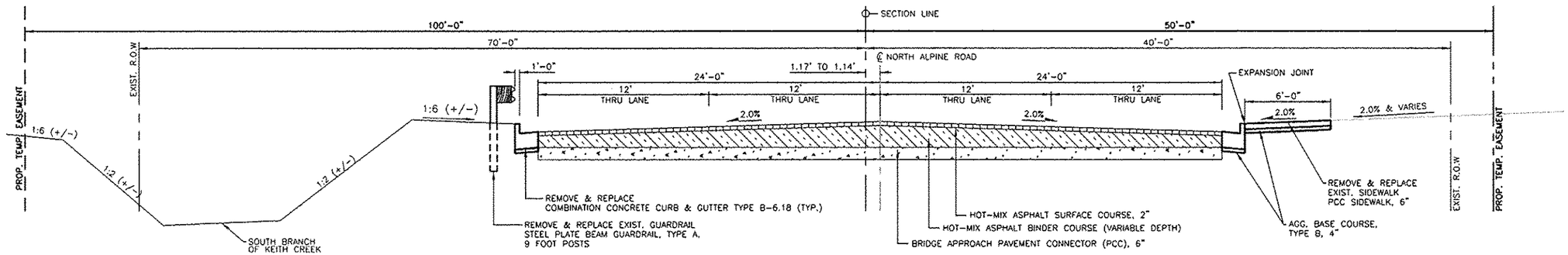
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Typical Sections PR 2.dgn

JOB NUMBER:
14-592

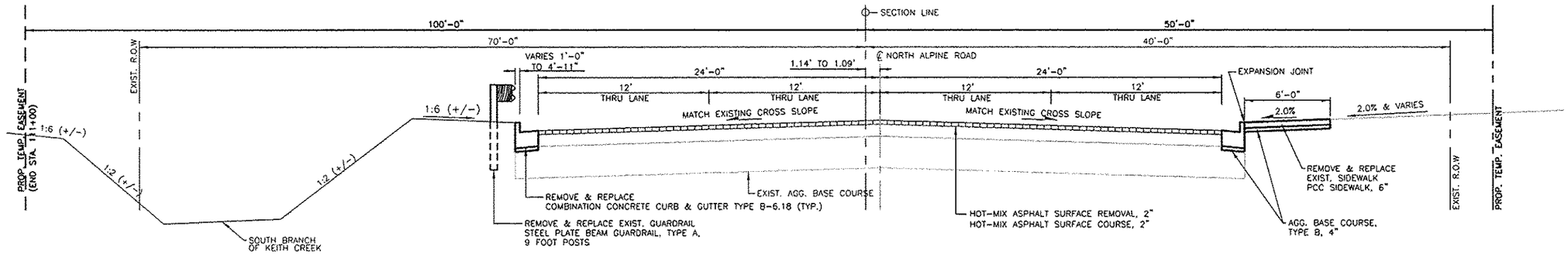
SHEET NUMBER:
07 of 82

PLOT DATE: 3/3/2015

85619



PROPOSED SECTION NORTH ALPINE ROAD
STATION 10+44.10 TO 10+57.84
N.T.S.



PROPOSED SECTION NORTH ALPINE ROAD
STATION 10+57.84 TO 12+85
N.T.S.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
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425 EAST STATE STREET
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REVISIONS

REV. NO.	DESCRIPTION	DATE

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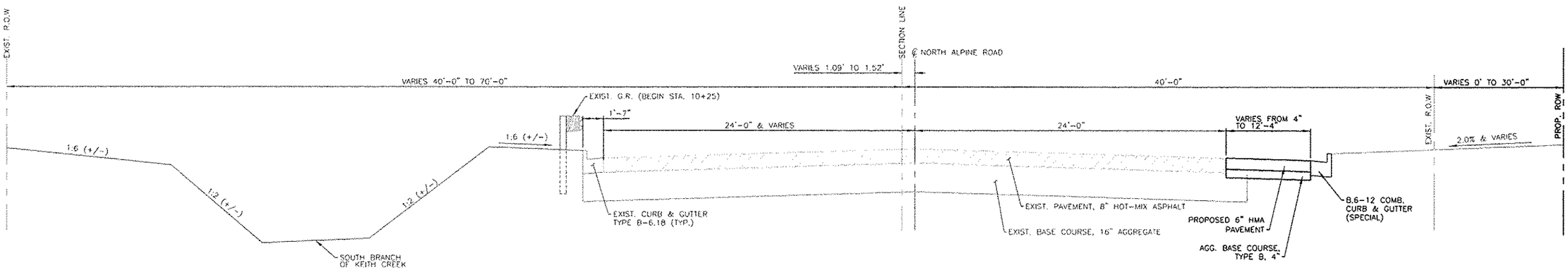
PROPOSED TYPICAL SECTIONS

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Typical Sections PR 3.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
08 of 82

85619



TYPICAL SECTION FOR TEMPORARY WIDENING
NORTH ALPINE ROAD
STATION 8+09.62 TO 12+78.82
N.T.S.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

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ROCKFORD, IL 61104

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ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

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APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
TYPICAL SECTION - TEMPORARY WIDENING

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Typical Sections Temp Wid.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
09 of 82

85619

SCHEDULE OF QUANTITIES

44000100 PAVEMENT REMOVAL		
LOCATION TO LOCATION		SQ YD
9+42	10+58	625.0
	TOTAL	625.0

44000157 HOT-MIX ASPHALT SURFACE REMOVAL, 2"		
LOCATION TO LOCATION		SQ YD
8+00	9+42	942.0
10+58	12+85	1195.0
	TOTAL	2,137.0

44000200 DRIVEWAY PAVEMENT REMOVAL		
LOCATION TO LOCATION		SQ YD
10+03	10+87	105.0
11+19	111+39	42.0
	TOTAL	147.0

63200310 GUARDRAIL REMOVAL			
LOCATION TO LOCATION			FOOT
LT	10+25	12+85	260.4
		TOTAL	260.4

44000500 COMBINATION CURB AND GUTTER REMOVAL			
LOCATION TO LOCATION			FOOT
RT	8+00	9+77	176.7
RT	10+87	12+85	198.1
LT	8+00	9+97	198.1
LT	10+21	12+85	263.8
		TOTAL	836.6

44000300 CURB REMOVAL			
LOCATION TO LOCATION			FOOT
RT	10+03	10+23	31.3
RT	10+50	10+87	47.5
		TOTAL	78.8

20100500 TREE REMOVAL, ACRES			
LOCATION TO LOCATION			ACRES
LT	9+59	11+00	0.13
RT	8+00	9+00	0.02
		TOTAL	0.20

44000600 SIDEWALK REMOVAL			
LOCATION TO LOCATION			SQ FT
RT	8+00	10+21	1440.5
RT	10+64	12+85	1064.9
		TOTAL	2,505.4

55101200 STORM SEWER REMOVAL, 24'			
LOCATION TO LOCATION			FOOT
RT	10+49	10+71	20.0
		TOTAL	20.0

55101600 STORM SEWER REMOVAL, 36"			
LOCATION TO LOCATION			FOOT
LT	10+69	10+94	20.0
		TOTAL	20.0

X5610712 WATER MAIN REMOVAL, 12"			
LOCATION TO LOCATION			FOOT
LT	9+32	10+57	124.0
		TOTAL	124.0

60604400 COMBINATION CURB & GUTTER, TYPE B-6.18			
LOCATION TO LOCATION			FOOT
RT	8+00	9+77	176.2
RT	10+06	12+85	279.3
LT	8+00	9+94	195.7
LT	10+23	12+85	261.0
		TOTAL	912.2

Z0022800 FENCE REMOVAL			
LOCATION TO LOCATION			FOOT
LT	9+00	11+00	203.0
		TOTAL	203.0

25000210 SEEDING CLASS 2A 25100115 MULCH METHOD 2				28000250 TEMPORARY EROSION CONTROL SEEDING
LOCATION TO LOCATION			ACRE	POUND
8+00	9+74	RT	0.07	6.97
9+00	11+00	LT	0.17	17.04
9+73	10+35	RT	0.02	2.41
10+51	11+20	RT	0.02	2.44
11+35	12+85	RT	0.05	5.39
		TOTAL	0.3	34.0

NOTE: TEMPORARY EROSION CONTROL SEEDING IS APPLIED AT A RATE OF 100 LB / ACRE.

NOTE: NITROGEN, PHOSPHOROUS & POTASSIUM FERTILIZER NUTRIENTS ARE APPLIED AT A RATE OF 90 LB / ACRE.

28000400 PERIMETER EROSION BARRIER				
LOCATION TO LOCATION				FOOT
8+00	48' RT	9+51	48' RT	151.0
10+53	48' RT	11+15	48' RT	62.0
11+36	48' RT	12+85	48' RT	149.0
			TOTAL	362.0

X6064200 COMBINATION CURB & GUTTER, TYPE B-6.12 (SPECIAL)			
LOCATION TO LOCATION			FOOT
RT	8+10	9+20	110.9
RT	10+65	12+79	214.4
		TOTAL	325.3

28000500 INLET AND PIPE PROTECTION		
STATION		EACH
10+19	RT	1
10+34	LT	1
	TOTAL	2

FEHR GRAHAM
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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 4/23/2015
SCALE: N/A

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
SCHEDULE OF QUANTITIES

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Schedule of quantities.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
10 of 82

PLOT DATE: 4/23/2015

SCHEDULE OF QUANTITIES

550A0410 STORM SEWERS, CLASS A, TYPE 2, 24"			
LOCATION TO LOCATION			FOOT
RT	10+49	10+71	20.0
		TOTAL	20.0

Z0067900 STEEL CASING, 24"			
LOCATION TO LOCATION			FOOT
LT	9+80	10+29	49.0
		TOTAL	49.0

60255500 MANHOLES TO BE ADJUSTED			
LOCATION TO LOCATION		EACH	STAGE
9+22	32.4' RT	1.0	1
9+22	32.4' RT	1.0	3
TOTAL		2.0	

Z0056678 STORM SEWERS, TYPE 2, WATER MAIN QUALITY PIPE, 36"			
LOCATION TO LOCATION			FOOT
LT	10+69	10+94	20.0
		TOTAL	20.0

56103300 DUCTILE IRON WATER MAIN, 12"			
LOCATION TO LOCATION			FOOT
LT	9+32	10+57	142.0
		TOTAL	142.0

42400800 DETECTABLE WARNINGS			
LOCATION TO LOCATION			SF
RT	10+05	10+17	22.5
RT	10+67	10+86	34.4
		TOTAL	56.9

550A0340 STORM SEWERS, CLASS A, TYPE 2, 12"			
LOCATION TO LOCATION			FOOT
RT	10+02	10+19	18.0
LT	10+34	10+41	10.0
		TOTAL	28.0

56105750 BUTTERFLY VALVES, 12"		
LOCATION TO LOCATION		EACH
9+36	33.6' LT	1.0
TOTAL		1.0

60235700 INLETS, TYPE A, TYPE 3 FRAME AND GRATE		
LOCATION TO LOCATION		EACH
10+20	34.2' RT.	1.0
10+34	23' LT.	1
TOTAL		2.0

X6061005 CONCRETE CURB, TYPE B (SPECIAL)			
LOCATION TO LOCATION			FOOT
RT	9+76	10+05	29.0
		TOTAL	29.0

56109424 DIP WATER MAIN FITTINGS, 12", 45 DEGREE BEND		
LOCATION TO LOCATION		EACH
9+56	33.6' LT	1.0
9+78	12.3' LT.	1.0
10+34	12.3' LT.	1.0
10+57	34.3' LT.	1.0
TOTAL		4.0

54213657 PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"		
LOCATION TO LOCATION		EACH
10+49	39' LT.	1.0
TOTAL		1.0

85619

SCHEDULE OF QUANTITIES

40600275			
BITUMINOUS MATERIALS (PRIME COAT)			
STATION TO STATION			POUNDS
SURFACE COURSE	8+00	12+85	1247.9
1ST BINDER COURSE	9+42	10+58	285.7
2ND BINDER COURSE	9+42	10+58	285.7
3RD BINDER COURSE	9+42	10+58	285.7
4TH BINDER COURSE	9+42	10+58	285.7
5TH BINDER COURSE	9+42	10+58	285.7
			250*
TOTAL			2,926.1
NOTE: CALCULATIONS USED 0.05LBS/SF			

40603085			
HMA BINDER COURSE, IL-19.0, N70			
STATION TO STATION		LENGTH (FOOT)	TON
9+42	9+50	8	33.0
9+50	9+75	25	100.7
9+75	10+00	25	98.1
10+00	10+25	25	73.1
10+25	10+50	25	46.1
10+50	10+58	8	14.5
			50*
TOTAL			415.5
NOTE: CALCULATIONS USED 112 LB/SY/INCH			

40600990					
TEMPORARY RAMP					
STATION TO STATION			LENGTH (FOOT)	WIDTH (FOOT)	SQ YD
RT	9+32	9+42	10	25.1	27.9
RT	10+58	10+68	10	24.0	26.7
LT	9+32	9+42	10	26.8	29.8
LT	10+58	10+68	10	24.0	26.7
					20*
				TOTAL	131.0

40603340		
HMA SURFACE COURSE, MIX"D", N70		
LOCATION TO LOCATION		TON
8+00	12+85	310.6
		35*
	TOTAL	345.6
NOTE: CALCULATIONS USED 112 LB/SY/INCH		

42400300			
PCC SIDEWALK, 6 INCH			
	LOCATION TO LOCATION		SQ FT
RT	8+00	10+18	1283.3
RT	10+65	11+21	311.3
RT	11+38	12+85	871.6
		TOTAL	2,466.3

Z0062456			
TEMPORARY PAVEMENT			
	LOCATION TO LOCATION		SQ YD
RT	8+09	12+79	531.2
		TOTAL	531.2

66400105			
CHAIN LINK FENCE, 4'			
LOCATION TO LOCATION			FOOT
LT	9+00	11+00	203.0
		TOTAL	203.0

42001420		
BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)		
LOCATION TO LOCATION		SQ YD
9+42	9+56	79.8
10+44	10+58	73.3
	TOTAL	153.1

42300200			
PCC DRIVEWAY PAVEMENT, 6 INCH			
	LOCATION TO LOCATION		SQ YD
RT	10+16	10+69	91.8
RT	11+11	11+48	49.8
		TOTAL	141.6

59300100						
CONTROLLED LOW STRENGTH MATERIAL						
LOCATION TO LOCATION			LENGTH	DEPTH	WIDTH	CU YD
RT	9+76	10+05	29.0	0.6	6	3.87
LT	9+76	10+05	29.0	0.875	6	5.64
						5*
					TOTAL	14.5

*NOMINAL CONTINGENCY QUANTITY AS APPROVED BY THE ENGINEER

FEHR GRAHAM
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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 3/3/2015
SCALE: N/A

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
SCHEDULE OF QUANTITIES

C:\Microstation\14\14-592\CADD\Plans\14-592-S-Schedule of quantities - 3.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
12 of 82

PLOT DATE: 3/3/2015

8561 3

SCHEDULE OF QUANTITIES

78000200
THERMOPLASTIC PAVEMENT MARKING - LINE 4"

LOCATION TO LOCATION				COLOR	TYPE	FOOT
RT	3+22	RT	19+68	WHITE	SKIP/DASH	420
RT	3+04	RT	5+16	YELLOW	EDGE-SOLID	212
RT	3+04	RT	5+16	YELLOW	SKIP/DASH	60
RT	3+04	RT	5+16	YELLOW	SKIP/DASH	60
RT	3+04	RT	5+16	YELLOW	EDGE-SOLID	212
LT	3+04	LT	19+68	WHITE	SKIP/DASH	420
RT	5+16	RT	6+58	YELLOW	D/EDGE-SOLID	284
RT	5+67	RT	6+58	WHITE	EDGE-SOLID	91
LT	7+31	LT	8+53	WHITE	EDGE-SOLID	122
RT	7+31	RT	9+50	YELLOW	D/EDGE-SOLID	447
RT	7+31	RT	19+68	YELLOW	D/EDGE-SOLID	2,474
LT	16+73	LT	19+68	YELLOW	D/EDGE-SOLID	584
					TOTAL	5,386

78000400
THERMOPLASTIC PAVEMENT MARKING - LINE 6"

LOCATION TO LOCATION				COLOR	TYPE	FOOT
RT	6+65	LT	6+65	WHITE	CROSS WALK	59
RT	6+72	LT	6+72	WHITE	CROSS WALK	64
					TOTAL	123

78000650
THERMOPLASTIC PAVEMENT MARKING - LINE 24"

LOCATION TO LOCATION				COLOR	TYPE	FOOT
RT	6+58	RT	6+58	WHITE	STOP BAR	30.5
LT	7+31	LT	7+31	WHITE	STOP BAR	44.5
					TOTAL	75

70300220
TEMPORARY PAVEMENT MARKING - LINE 4"

LOCATION TO LOCATION				COLOR	FOOT	STAGE
RT	BEGIN	RT	13+60	WHITE	1452	1
RT	2+95	LT	13+43	YELLOW	1056	1
LT	6+09	LT	18+85	YELLOW	1277	1
RT	BEGIN	RT	3+15	WHITE	234	2
RT	BEGIN	RT	8+12	WHITE	949	2
RT	8+10	RT	17+05	WHITE	440	2
RT	2+95	RT	15+05	YELLOW	1212	2
RT	6+09	RT	15+05	YELLOW	897	2
LT	6+09	LT	18+85	WHITE	1279	2
RT	BEGIN	RT	12+62	WHITE	1414	3
			TOTAL		10,210	

70301000
WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION TO LOCATION				COLOR	FOOT	SQ FT	STAGE
RT	BEGIN	RT	13+60	WHITE	1452	483.9	1
RT	2+95	LT	13+43	YELLOW	1056	352	1
LT	6+09	LT	18+85	YELLOW	1277	425.7	1
RT	BEGIN	RT	3+15	WHITE	234	78	2
RT	BEGIN	RT	8+12	WHITE	949	316.3	2
RT	8+10	RT	17+05	WHITE	440	146.7	2
RT	2+95	RT	15+05	YELLOW	1212	404	2
RT	6+09	RT	15+05	YELLOW	897	299	2
LT	6+09	LT	18+85	WHITE	1279	426.3	2
RT	BEGIN	RT	12+62	WHITE	1414	471.3	3
					TOTAL	3,403	

70400100
TEMPORARY CONCRETE BARRIER

LOCATION TO LOCATION				FOOT	STAGE
RT	8+11	RT	11+79	368	1
LT	6+98	LT	7+99	101	2
LT	11+91	LT	12+58	67	2
			TOTAL	536	

70400200
RELOCATE TEMPORARY CONCRETE BARRIER

LOCATION TO LOCATION				FOOT	STAGE
LT	8+11	LT	11+79	368	2
			TOTAL	368	

78000100
THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS

LOCATION TO LOCATION		TYPE	SQ FT
RT	3+16	LEFT ARROW	15.6
RT	4+93	LEFT ARROW	15.6
RT	5+75	LEFT ARROW	15.6
RT	6+07	ONLY	20.8
RT	6+39	LEFT ARROW	15.6
LT	7+50	RIGHT ARROW	15.6
LT	7+99	ONLY	20.8
LT	8+46	RIGHT ARROW	15.6
TOTAL			135.2

78000600
THERMOPLASTIC PAVEMENT MARKING - LINE 12"

LOCATION TO LOCATION				COLOR	TYPE	FOOT
RT	7+31	RT	9+50	YELLOW	EDGE-SOLID	64
LT	16+73	LT	19+68	YELLOW	EDGE-SOLID	71
					TOTAL	135

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DRAWN BY: GM
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DATE: 3/5/2015
SCALE: N/A

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
SCHEDULE OF QUANTITIES

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Schedule of quantities - 4.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
13 of 82

PLOT DATE: 3/5/2015

85619

SCHEDULE OF QUANTITIES

78300100
PAVEMENT MARKING REMOVAL

LOCATION TO LOCATION				COLOR	TYPE	FOOT	SQ FT
RT	3+22	RT	19+68	WHITE	SKIP/DASH	420	140.0
RT	3+04	RT	5+16	YELLOW	EDGE-SOLID	212	70.7
RT	3+04	RT	5+16	YELLOW	SKIP/DASH	60	20.0
RT	3+04	RT	5+16	YELLOW	SKIP/DASH	60	20.0
RT	3+04	RT	5+16	YELLOW	EDGE-SOLID	212	70.7
LT	3+04	LT	19+68	WHITE	SKIP/DASH	420	140.0
RT	5+16	RT	6+58	YELLOW	D/EDGE-SOLID	284	94.7
RT	5+67	RT	6+58	WHITE	EDGE-SOLID	91	30.3
LT	7+31	LT	8+53	WHITE	EDGE-SOLID	122	40.7
RT	7+31	RT	9+50	YELLOW	D/EDGE-SOLID	447	149.0
RT	7+31	RT	19+68	YELLOW	D/EDGE-SOLID	2474	824.7
LT	16+73	LT	19+68	YELLOW	D/EDGE-SOLID	584	194.7
RT	6+65	LT	6+65	WHITE	CROSS WALK	59	29.5
RT	6+72	LT	6+72	WHITE	CROSS WALK	64	32.0
RT	7+31	RT	9+50	YELLOW	EDGE-SOLID	64	64.0
LT	16+73	LT	19+68	YELLOW	EDGE-SOLID	71	71.0
RT	6+58	RT	6+58	WHITE	STOP BAR	30.5	61.0
LT	7+31	LT	7+31	WHITE	STOP BAR	44.5	89.0
RT	3+16			WHITE	LEFT ARROW		15.6
RT	4+93			WHITE	LEFT ARROW		15.6
RT	5+75			WHITE	LEFT ARROW		15.6
RT	6+07			WHITE	ONLY		20.8
RT	6+39			WHITE	LEFT ARROW		15.6
LT	7+50			WHITE	RIGHT ARROW		15.6
LT	7+99			WHITE	ONLY		20.8
LT	8+46			WHITE	RIGHT ARROW		15.6
						TOTAL	2,277.2

63100085
TRAFFIC BARRIER TERMINAL, TYPE 6

STATION TO STATION			EACH
LT	10+24.00	10+68.00	1
		TOTAL	1

63000003
STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS

STATION TO STATION			FOOT
LT	10+68.00	12+85.00	225.0
		TOTAL	225.0

21101600
TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH

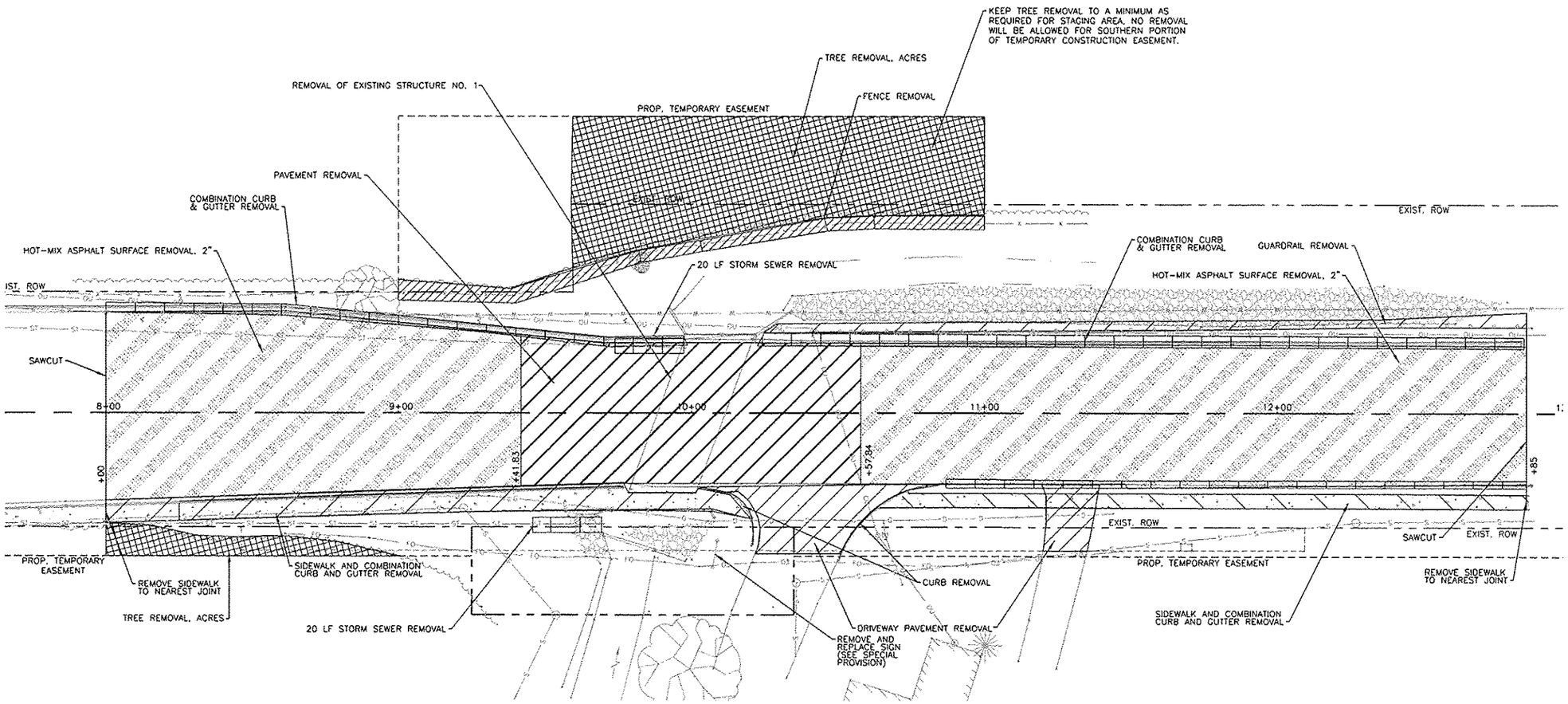
STA.	STA.	LENGTH	WIDTH	SQ YD
9+74	10+03	28.79	9	28.79
			TOTAL	29.0

20200100
EARTH EXCAVATION

STA.	STA.	CUT (CU YD)
8+00	8+25	8.49
8+25	8+50	12.18
8+50	8+75	15.11
8+75	9+00	17.43
9+00	9+25	18.51
9+25	9+50	16.44
9+50	9+75	10.93
9+75	10+00	3.87
10+00	10+25	6.67
10+25	10+50	12.83
10+50	10+75	15.79
10+75	11+00	20.08
11+00	11+25	26.99
11+25	11+50	26.71
11+50	11+75	18.56
11+75	12+00	15.39
12+00	12+25	12.89
12+25	12+50	11.09
12+50	12+75	10.10
	TOTAL	280

85619

SCALE
20 0 20 40 FEET



NOTES:

1. REMOVAL OF EXISTING RAISED REFLECTIVE PAVEMENT MARKERS FROM STA. 8+00 TO STA. 12+85 SHALL BE PER SECTION 783 OF THE STANDARD SPECIFICATIONS. QUANTITIES FOR RAISED REFLECTIVE PAVEMENT MARKERS HAVE BEEN ESTIMATED.
2. SEE MAINTENANCE OF TRAFFIC PLANS FOR REMOVAL SEQUENCE.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

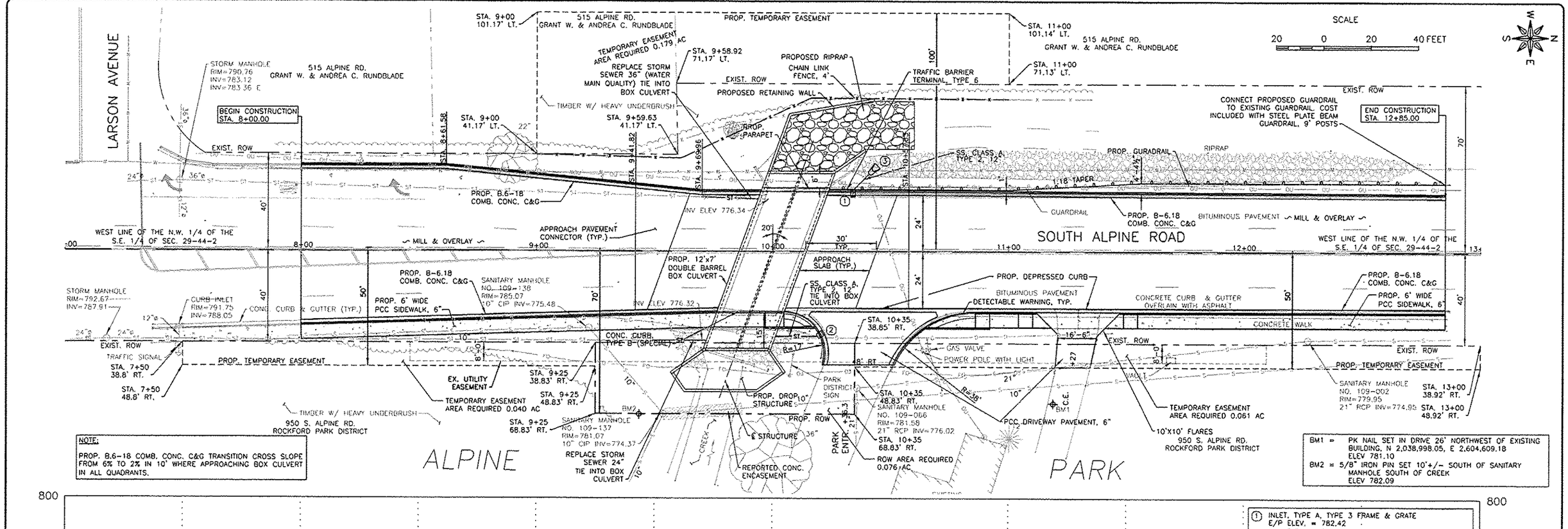
DRAWING:
REMOVAL PLAN

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Removal.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
15 of 82

85619



FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CMO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
PLAN & PROFILE

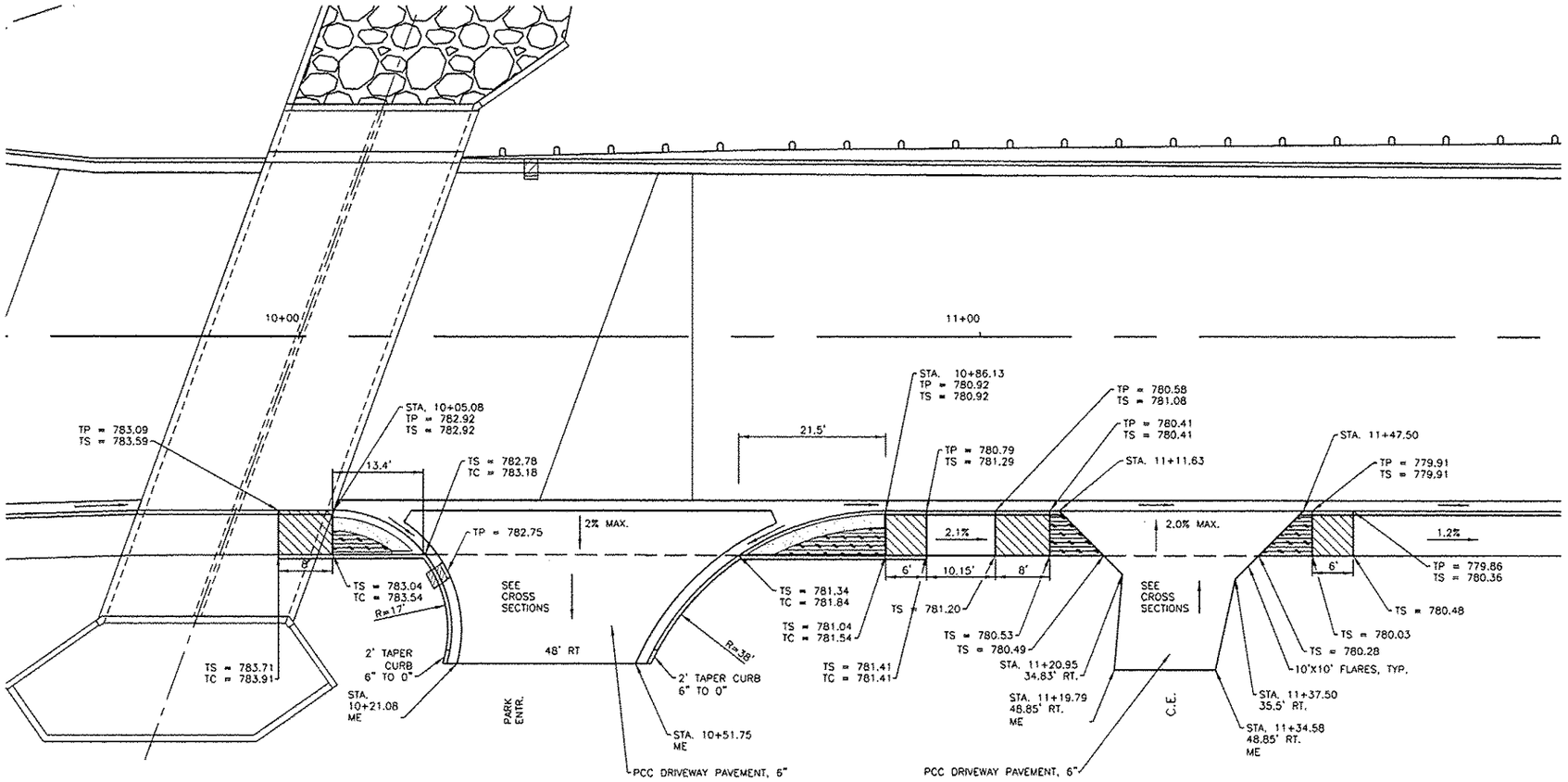
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Preliminary Plan & Profile.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
16 of 82

PLOT DATE: 3/3/2015

85619



SCALE
10 0 10 20 FEET

NOTES:

1. ALL DETECTABLE WARNINGS ARE 24" WIDE.
2. 6" WIDE VARIABLE HEIGHT CURB ALONG SIDEWALK SHALL BE MEASURED AND PAID AS PORTLAND CEMENT CONCRETE SIDEWALK.
3. SPOT ELEVATIONS
   TS = TOP OF SIDEWALK OR SLAB
   TC = TOP OF CURB
   TP = TOP OF PAVEMENT
   ME = MATCH EXISTING
4. CURB RAMPS SHALL COMPLY WITH "PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY", LATEST EDITION, PUBLISHED BY THE U.S. ACCESS BOARD AND THE FINAL REPORT OF THE US ACCESS BOARD PUBLISHED JAN 2011 ENTITLED "INITIATIVE ON DIMENSIONAL TOLERANCES IN CONSTRUCTION, DIMENSIONAL TOLERANCE FOR SURFACE ACCESSIBILITY".
5. CURB RAMPS STANDARDS INCLUDE:
   424001 PERPENDICULAR CURB RAMPS FOR SIDEWALKS
   424026 ENTRANCE/ALLEY PEDESTRIAN CROSSINGS

LEGEND

- DETECTABLE WARNINGS
- RAMP – SLOPE MAX. 1:12 MAX. LENGTH 15'
- LANDING – MAX 1:50 ANY DIRECTION

FEHR GRAHAM
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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
DRIVEWAY DETAIL PLAN

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Driveway detail.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 17 of 82

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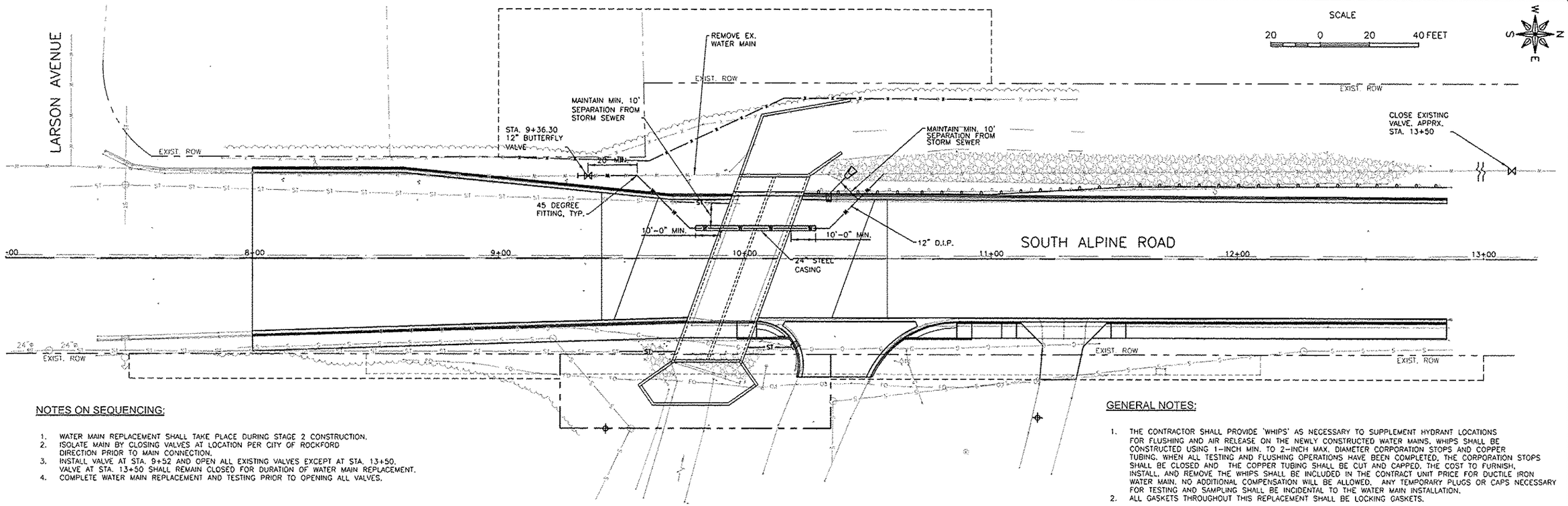
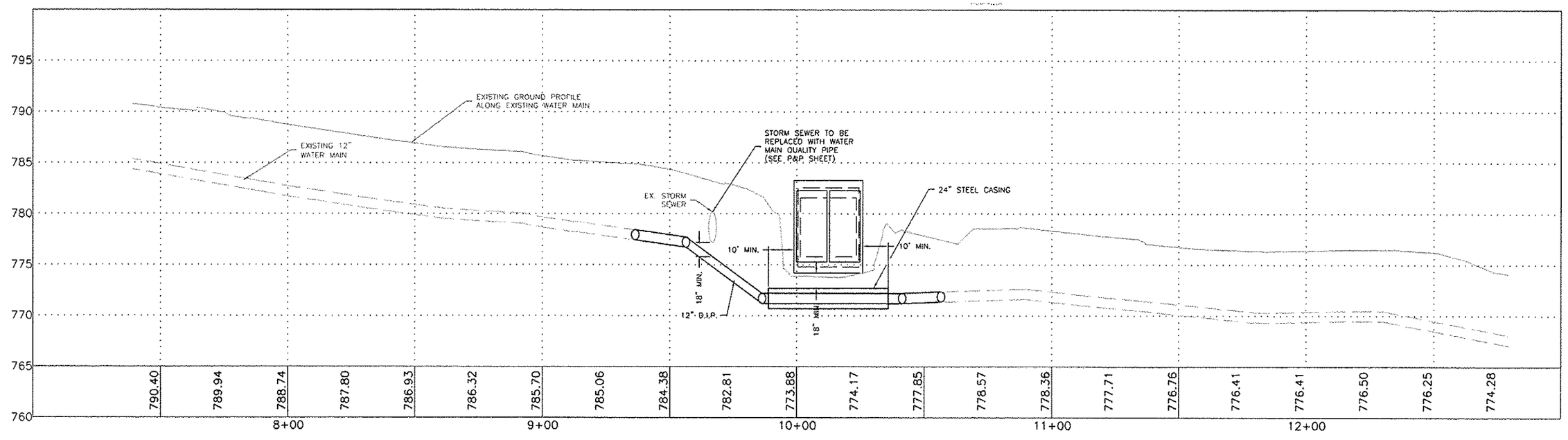


NOTES ON SEQUENCING:

1. WATER MAIN REPLACEMENT SHALL TAKE PLACE DURING STAGE 2 CONSTRUCTION.
2. ISOLATE MAIN BY CLOSING VALVES AT LOCATION PER CITY OF ROCKFORD DIRECTION PRIOR TO MAIN CONNECTION.
3. INSTALL VALVE AT STA. 9+52 AND OPEN ALL EXISTING VALVES EXCEPT AT STA. 13+50. VALVE AT STA. 13+50 SHALL REMAIN CLOSED FOR DURATION OF WATER MAIN REPLACEMENT.
4. COMPLETE WATER MAIN REPLACEMENT AND TESTING PRIOR TO OPENING ALL VALVES.

GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE 'WHIPS' AS NECESSARY TO SUPPLEMENT HYDRANT LOCATIONS FOR FLUSHING AND AIR RELEASE ON THE NEWLY CONSTRUCTED WATER MAINS. WHIPS SHALL BE CONSTRUCTED USING 1-INCH MIN. TO 2-INCH MAX. DIAMETER CORPORATION STOPS AND COPPER TUBING. WHEN ALL TESTING AND FLUSHING OPERATIONS HAVE BEEN COMPLETED, THE CORPORATION STOPS SHALL BE CLOSED AND THE COPPER TUBING SHALL BE CUT AND CAPPED. THE COST TO FURNISH, INSTALL, AND REMOVE THE WHIPS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR DUCTILE IRON WATER MAIN. NO ADDITIONAL COMPENSATION WILL BE ALLOWED. ANY TEMPORARY PLUGS OR CAPS NECESSARY FOR TESTING AND SAMPLING SHALL BE INCIDENTAL TO THE WATER MAIN INSTALLATION.
2. ALL GASKETS THROUGHOUT THIS REPLACEMENT SHALL BE LOCKING GASKETS.



FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
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ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CMO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
WATER MAIN RELOCATION PLAN

C:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Water Main P&P.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 18 of 82

PLOT DATE: 3/3/2015

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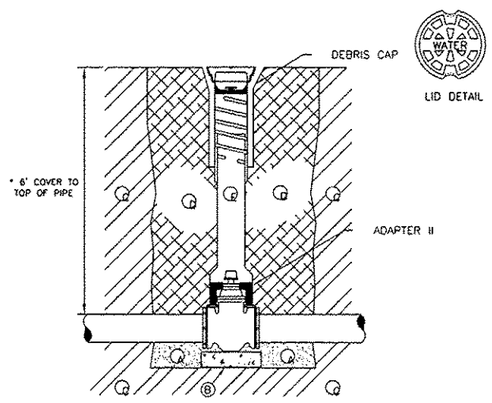
ITEM	DESCRIPTION
A	APPROVED BEDDING MATERIAL
B	16"x8"x4" CONCRETE BLOCKING
C	UNDISTURBED SOIL
D	APPROVED GRANULAR, TRENCH BACKFILL MATERIAL
E	VALVE BOX SUPPLIER SHALL BE APPROVED BY THE CITY OF ROCKFORD

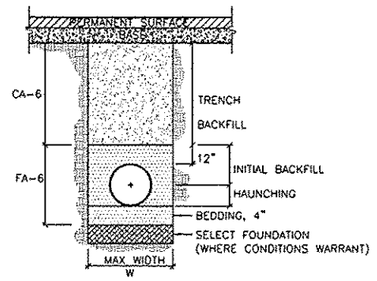


* UNLESS OTHERWISE INDICATED ON PLANS

CITY OF ROCKFORD
VALVE & VALVE BOX DETAIL
N.T.S.

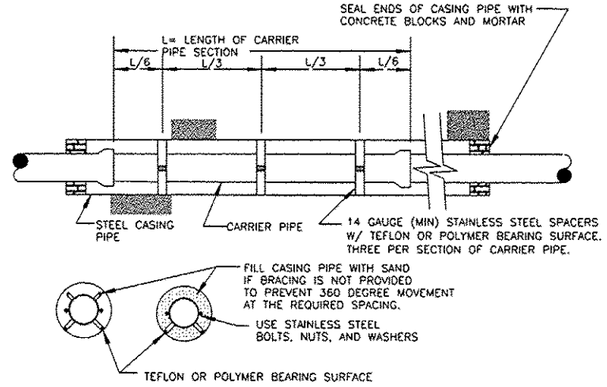
DTL-VB

PIPE DIA. (IN.)	MAX. PAY WIDTH (FT.)
<4	3.00
4	3.33
6	3.58
8	3.78
10	3.97
12	4.17
15	4.46
16	4.56
18	4.75
24	5.33



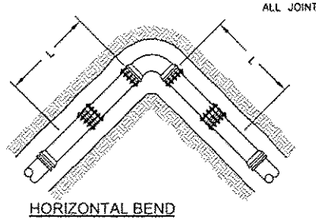
NOTE:
THESE ITEMS WILL BE INCIDENTAL ON WATER SERVICES. TRENCH BACKFILL SHALL BE MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR OPTIMUM DENSITY.

TRENCH BACKFILL AND SELECT FOUNDATION
MATERIAL PAY LIMIT SCHEDULE
N.T.S.

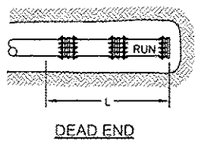


WATER MAIN CASING DETAIL
N.T.S.

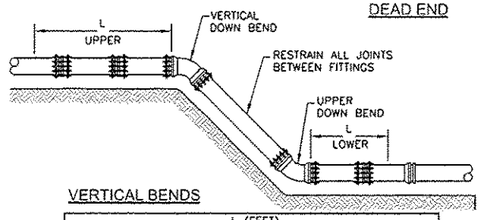
ALL JOINTS WITHIN LENGTH "L" OF FITTING MUST BE RESTRAINED



HORIZONTAL BEND



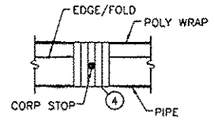
DEAD END



VERTICAL BENDS

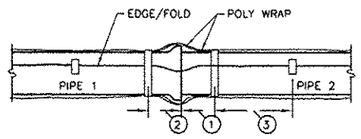
	L (FEET)						
DIP DIA. (INCHES)	HORIZONTAL BENDS				VERTICAL DOWN BENDS	VERTICAL UP BENDS	DEAD ENDS
	11.25°	22.5°	45°	90°	45°	45°	
4 TO 8	1	3	6	14	15	6	36
10 TO 12	2	4	8	20	21	8	51
14 TO 16	3	5	11	25	27	11	66
18 TO 20	3	6	13	31	33	13	80
24	4	7	15	36	39	15	94

RESTRAINING GLAND RESTRAINT
N.T.S.



DIRECT TAP WITH POLY WRAP

PIPE DIA. (IN.)	MIN. POLY WRAP WIDTH (IN.)	
	FLAT TUBE	SHEET
4	14	28
6	16	32
8	20	40
10	24	48
12	27	54
14	30	60
16	34	68



1. EXTEND POLY WRAP FOR PIPE 1 A MINIMUM OF 12" BEYOND BELL ONTO PIPE 2. SECURE TO PIPE 2 WITH TAPE OR PLASTIC TIE STRAPS.
2. EXTEND POLY WRAP FOR PIPE 2 ONTO PIPE 1 A MINIMUM OF 12" BEYOND THE PIPE 1 BELL. INSTALL OVER THE PIPE 1 POLY WRAP AND SECURE THE END WITH TAPE OR PLASTIC TIE STRAPS.
3. SECURE THE CUT EDGE ON POLY SHEETS EVERY 3'-0". SECURE THE FOLD ON POLY TUBES EVERY 4'-0". IF INSTALLED BELOW THE WATER TABLE, SECURE EVERY 2'-0".
4. INSTALL 2 TO 3 WRAPS OF POLYETHYLENE ADHESIVE TAPE COMPLETELY AROUND THE PIPE AND POLY WRAP AT TAPPING LOCATION. MOUNT TAPPING MACHINE OVER THE TAPE AND INSTALL CORPORATION THROUGH THE TAPE AND POLY WRAP. REPAIR ANY DAMAGE TO POLY WRAP IF NEEDED.
5. POLY WRAP SHALL BE A MINIMUM OF 8 MILS THICK AND SHALL BE FURNISHED IN TUBE FORM.

POLY WRAP INSTALLATION AT PIPE JOINTS

POLYETHYLENE ENCASEMENT
(POLY WRAP) INSTALLATION DETAIL
N.T.S.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/3/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
WATER MAIN DETAILS

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Water Main Details.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
19 of 82

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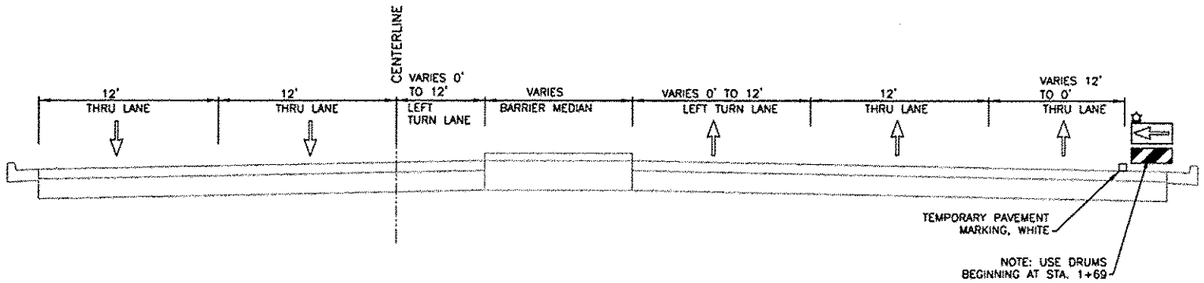
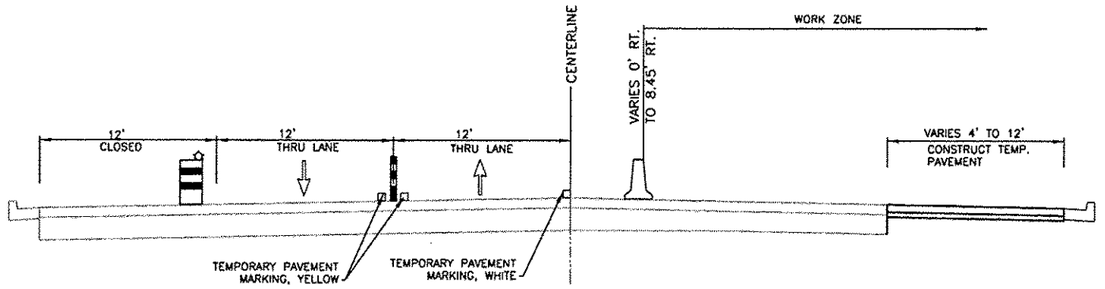
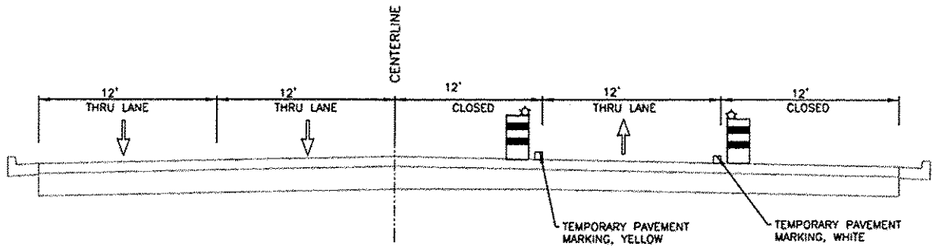


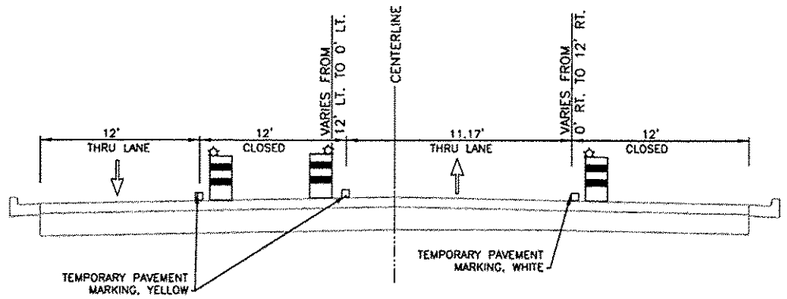
TRAFFIC CONTROL TYPICAL SECTION
STAGE 1
BEGIN TO STA 2+95



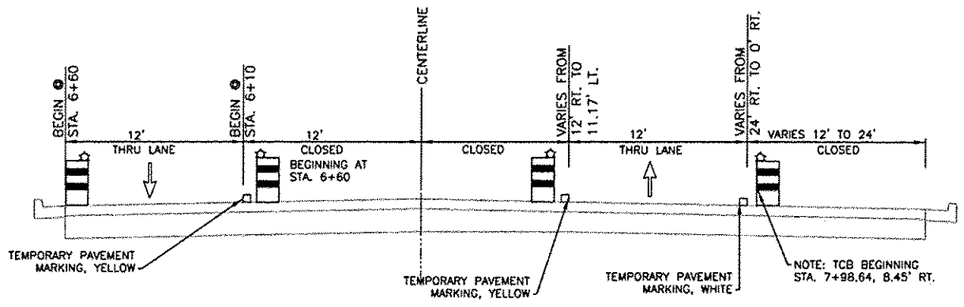
TRAFFIC CONTROL TYPICAL SECTION
STAGE 1
STA 8+46 TO STA 12+00



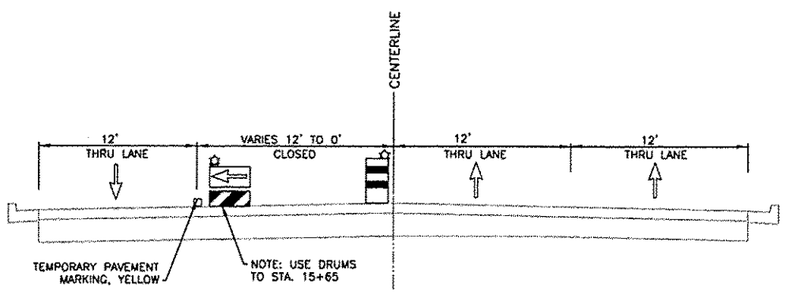
TRAFFIC CONTROL TYPICAL SECTION
STAGE 1
STA 2+95 TO STA 4+60



TRAFFIC CONTROL TYPICAL SECTION
STAGE 1
STA 12+00 TO STA 13+60



TRAFFIC CONTROL TYPICAL SECTION
STAGE 1
STA 4+60 TO STA 8+46



TRAFFIC CONTROL TYPICAL SECTION
STAGE 1
STA 13+60 TO STA 18+85

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ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CMO
DATE: 3/5/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
TYPICAL SECTIONS
TRAFFIC CONTROL STAGE 1

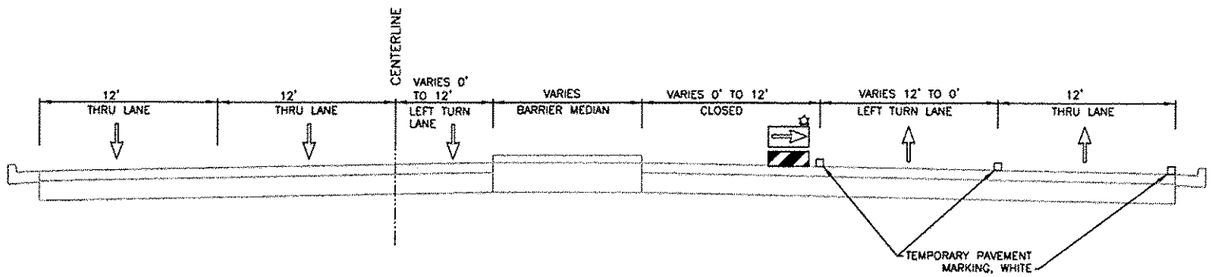
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Typ Sec Traf Ctrl Stage 1.dgn

JOB NUMBER:
14-592

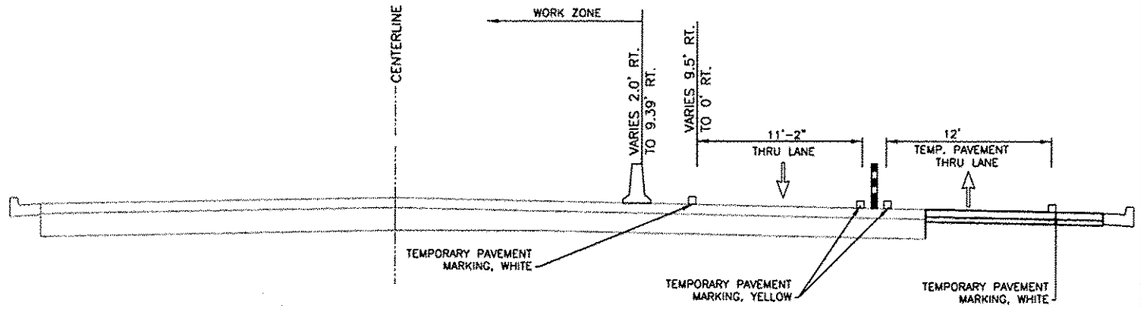
SHEET NUMBER:
20 of 82

PLOT DATE: 3/5/2015

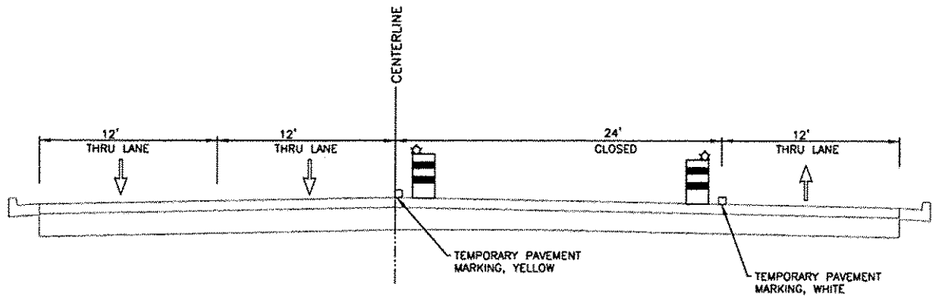
85619



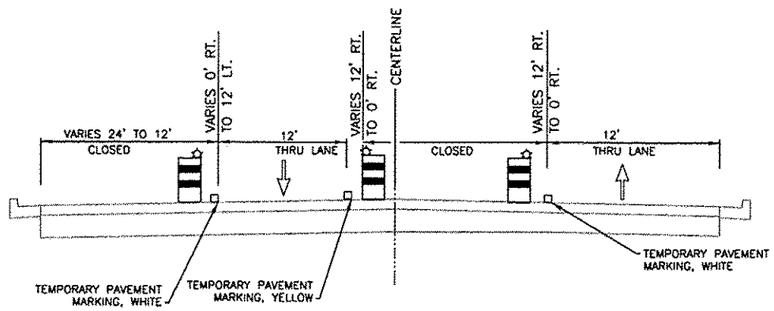
TRAFFIC CONTROL TYPICAL SECTION
STAGE 2
BEGIN TO STA 2+95



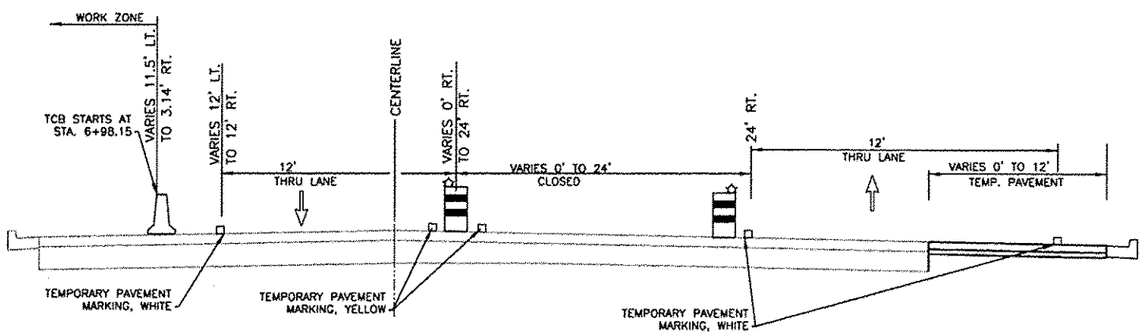
TRAFFIC CONTROL TYPICAL SECTION
STAGE 2
STA 8+66 TO STA 12+58.09



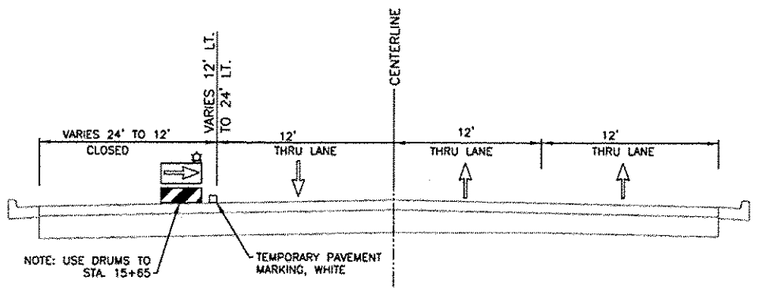
TRAFFIC CONTROL TYPICAL SECTION
STAGE 2
STA 2+95 TO STA 5+78.58



TRAFFIC CONTROL TYPICAL SECTION
STAGE 2
STA 12+58.09 TO STA 15+05



TRAFFIC CONTROL TYPICAL SECTION
STAGE 2
STA 5+78.58 TO STA 8+66



TRAFFIC CONTROL TYPICAL SECTION
STAGE 2
STA 15+05 TO STA 18+85

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ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CMO
DATE: 3/5/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
TYPICAL SECTIONS
TRAFFIC CONTROL STAGE 2

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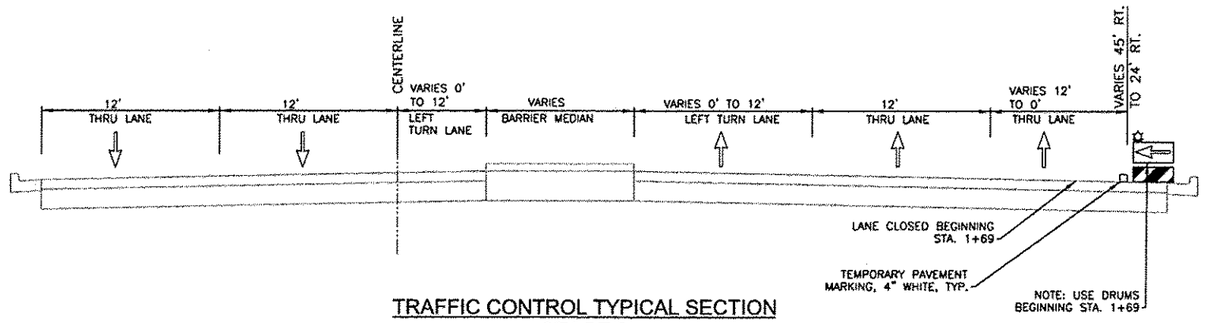
JOB NUMBER: 14-592

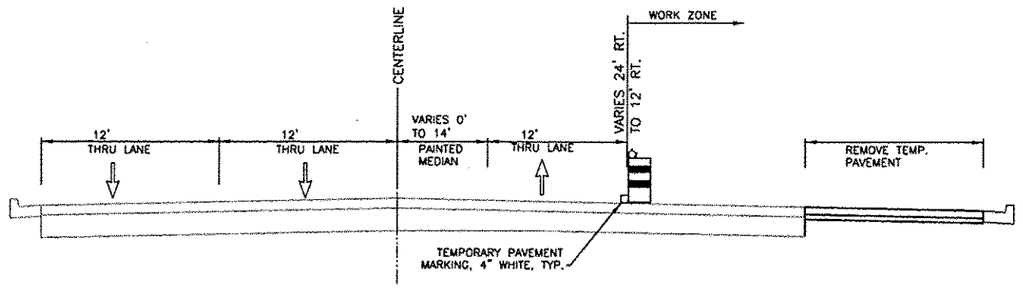
SHEET NUMBER: 21 of 82

PLOT DATE: 3/5/2015

85619



TRAFFIC CONTROL TYPICAL SECTION
STAGE 3
BEGIN TO STA 6+40



TRAFFIC CONTROL TYPICAL SECTION
STAGE 3
STA 6+40 TO STA 12+62.46

FEHR GRAHAM
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425 EAST STATE STREET
ROCKFORD, IL 61104

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DRAWN BY: GM
APPROVED BY: CMO
DATE: 3/5/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
TYPICAL SECTIONS
TRAFFIC CONTROL STAGE 3

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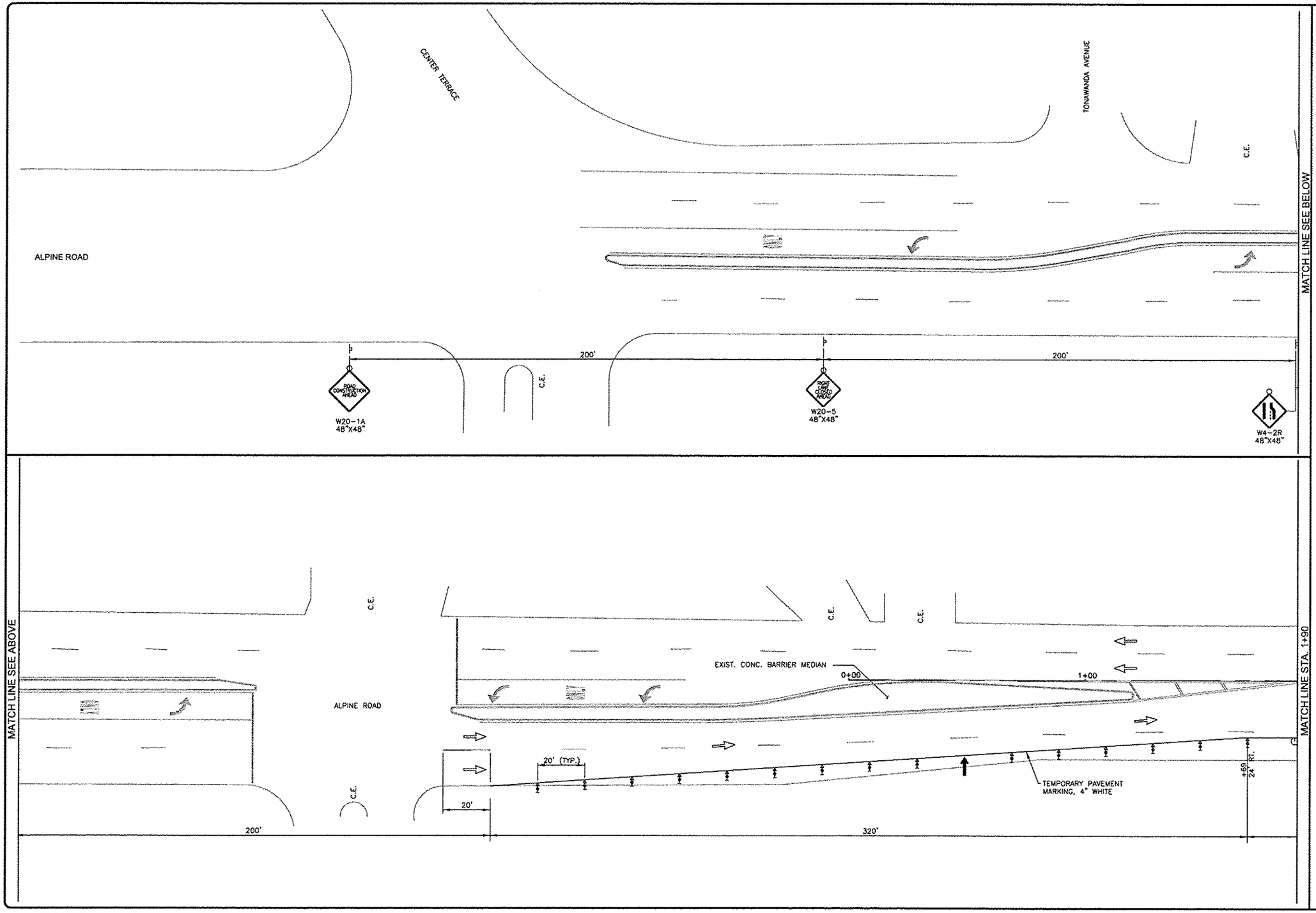
JOB NUMBER: 14-592

SHEET NUMBER: 22 of 82

85619



SCALE
20 0 20 40 FEET

N E S W

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT – SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

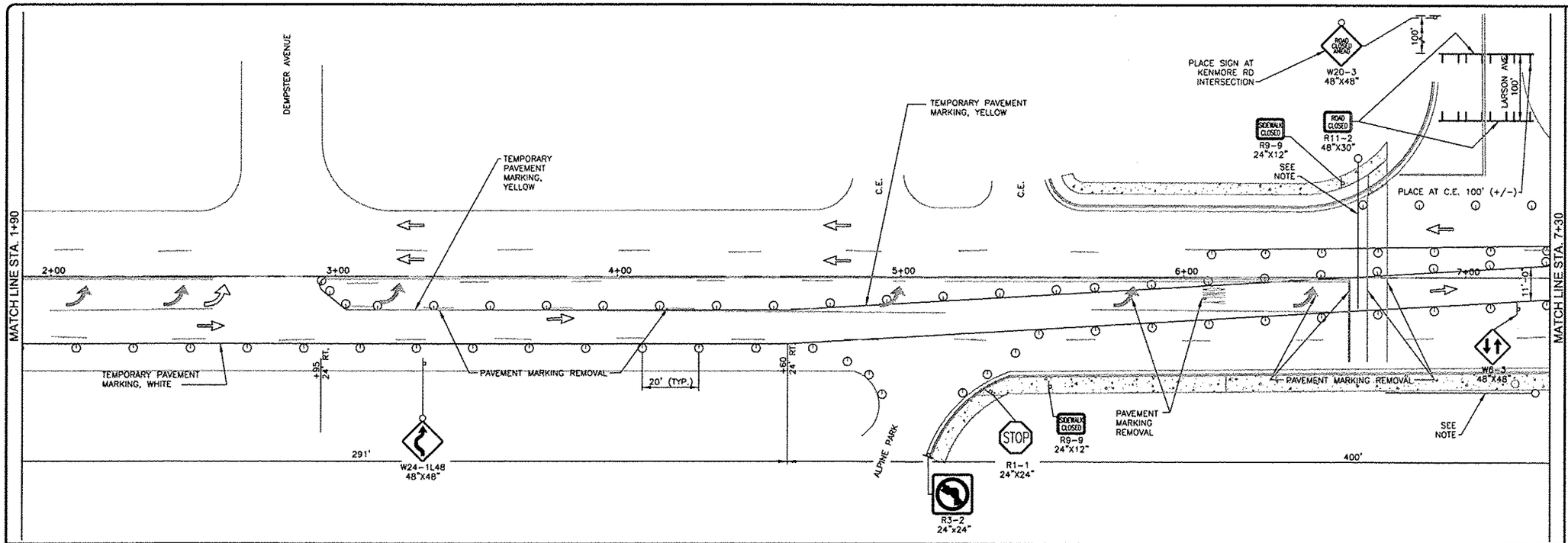
DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 1 – SHEET 1
SOUTH ALPINE ROAD

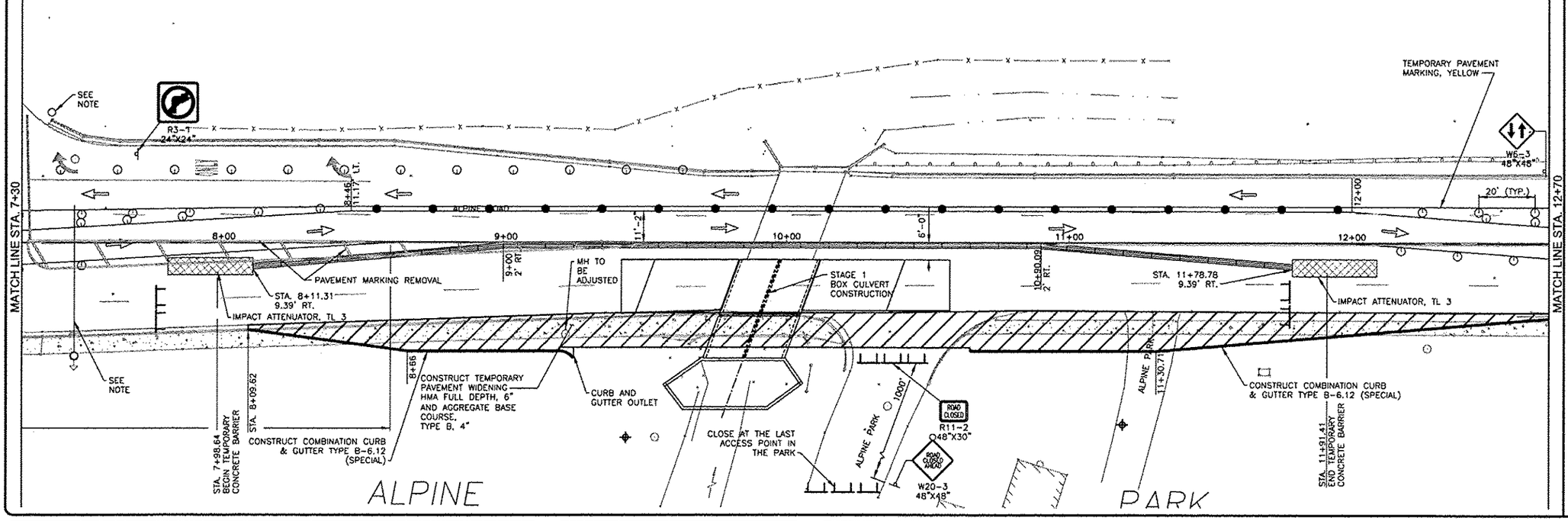
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-TC Stage 1A.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 23 of 82

85619





SCALE
20 0 20 40 FEET

NOTE: CONTACT CITY OF ROCKFORD TO DISABLE LARSON AVE. TRAFFIC SIGNALS FOR STAGES 1 & 2.

STAGE 1 CONSTRUCTION SEQUENCE

1. SET UP ALL TRAFFIC CONTROL.
2. STAGE 1 PAVEMENT, SIDEWALK & BOX CULVERT REMOVAL.
3. STAGE 1 BOX CULVERT CONSTRUCTION.
4. CONSTRUCT APPROACH SLAB, CONNECTOR PAVEMENT AND BINDER COURSE.
5. CONSTRUCT TEMPORARY PAVEMENT WIDENING, CURB AND GUTTER.
6. BARRIER WALL OFFSETS ARE TO THE CONSTRUCTION SIDE OF THE WALL.

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT – SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 1 - SHEET 2
SOUTH ALPINE ROAD

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-TC Stage 1B.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 24 of 82

PLOT DATE: 3/5/2015

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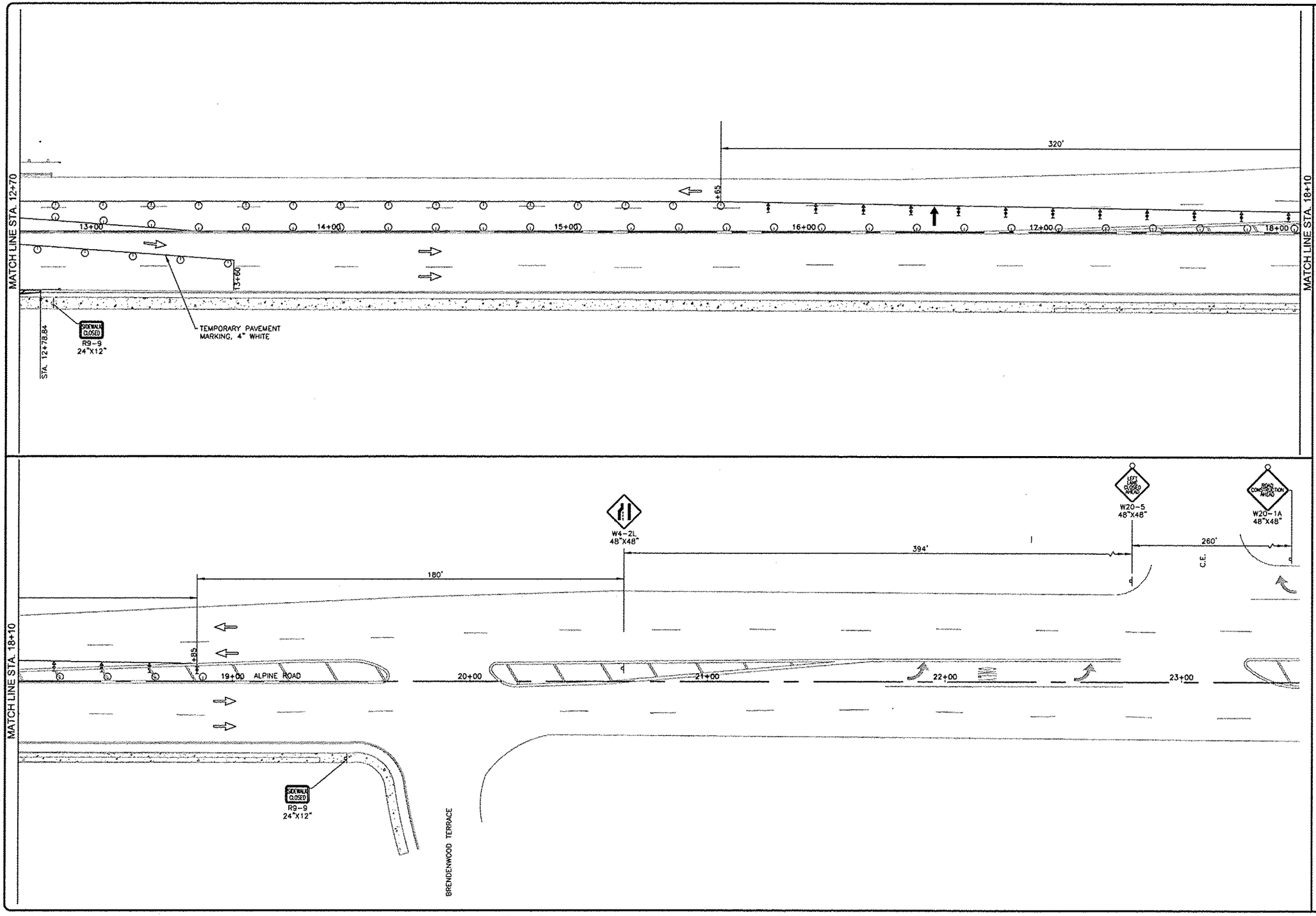

SCALE
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LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT - SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 1 - SHEET 3
SOUTH ALPINE ROAD

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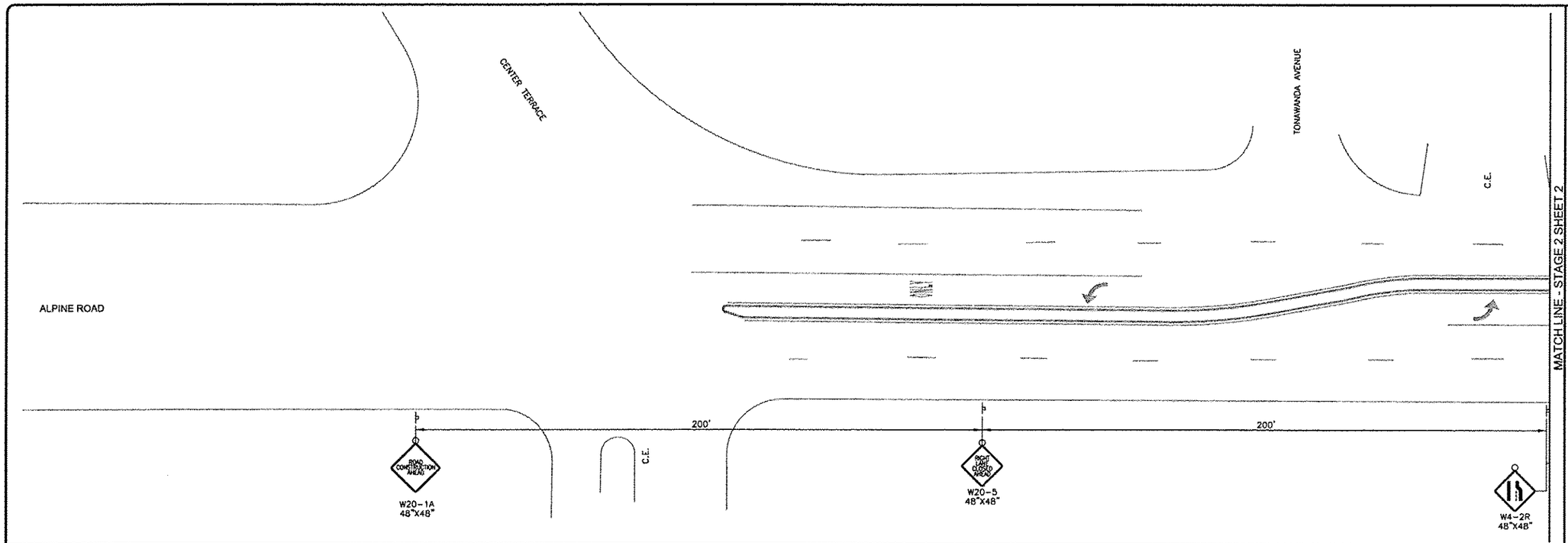
JOB NUMBER:
14-592

SHEET NUMBER:
25 of 82

85619



SCALE
20 0 20 20 FEET

NOTE: CONTACT CITY OF ROCKFORD TO DISABLE LARSON AVE. TRAFFIC SIGNALS FOR STAGES 1 & 2.

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT - SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 2 - SHEET 1
SOUTH ALPINE ROAD

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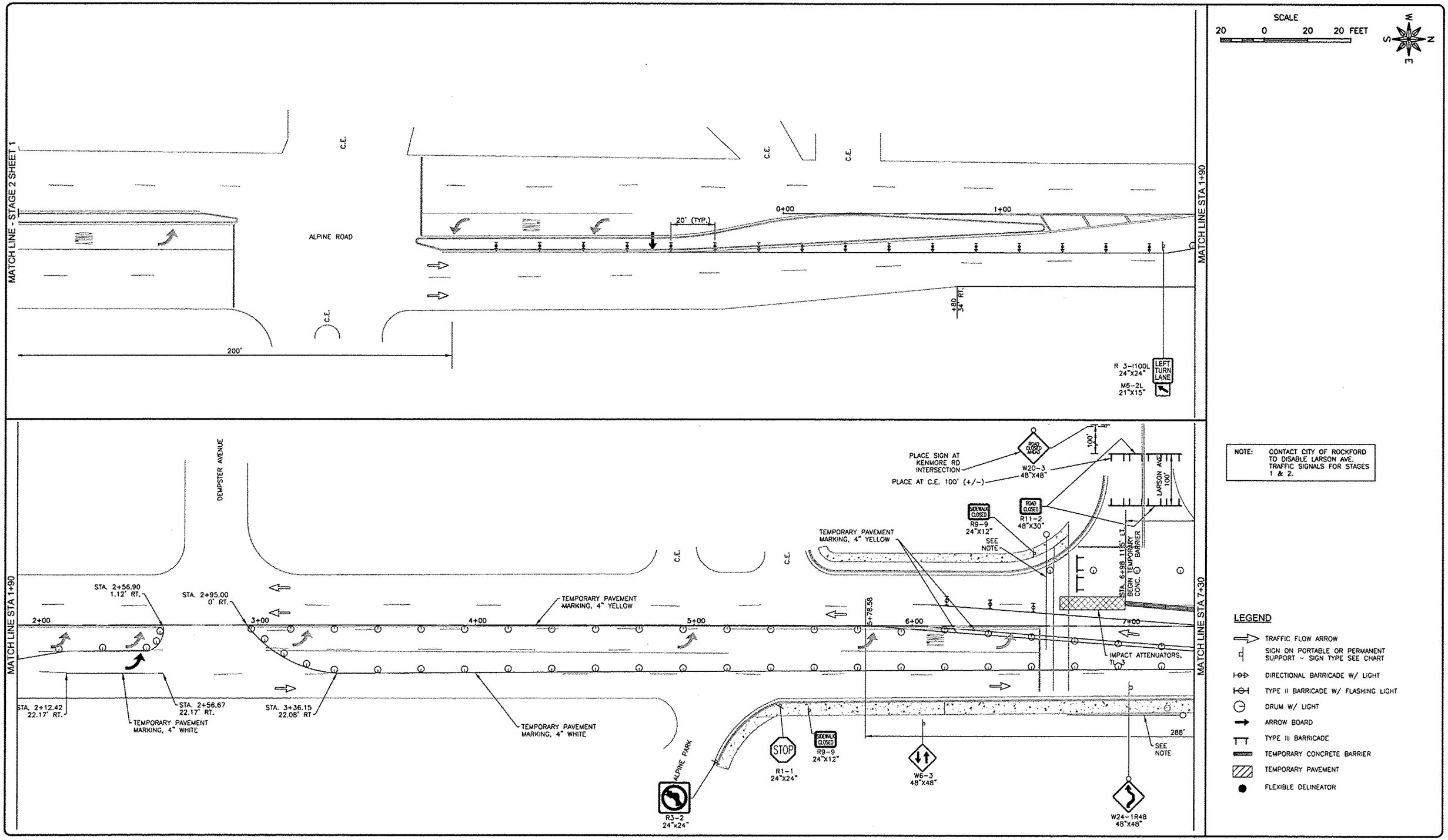
JOB NUMBER: 14-592

SHEET NUMBER: 26 of 82

85619



NOTE: CONTACT CITY OF ROCKFORD TO DISABLE LARSON AVE. TRAFFIC SIGNALS FOR STAGES 1 & 2.

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT ~ SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS		
REV. NO.	DESCRIPTION	DATE

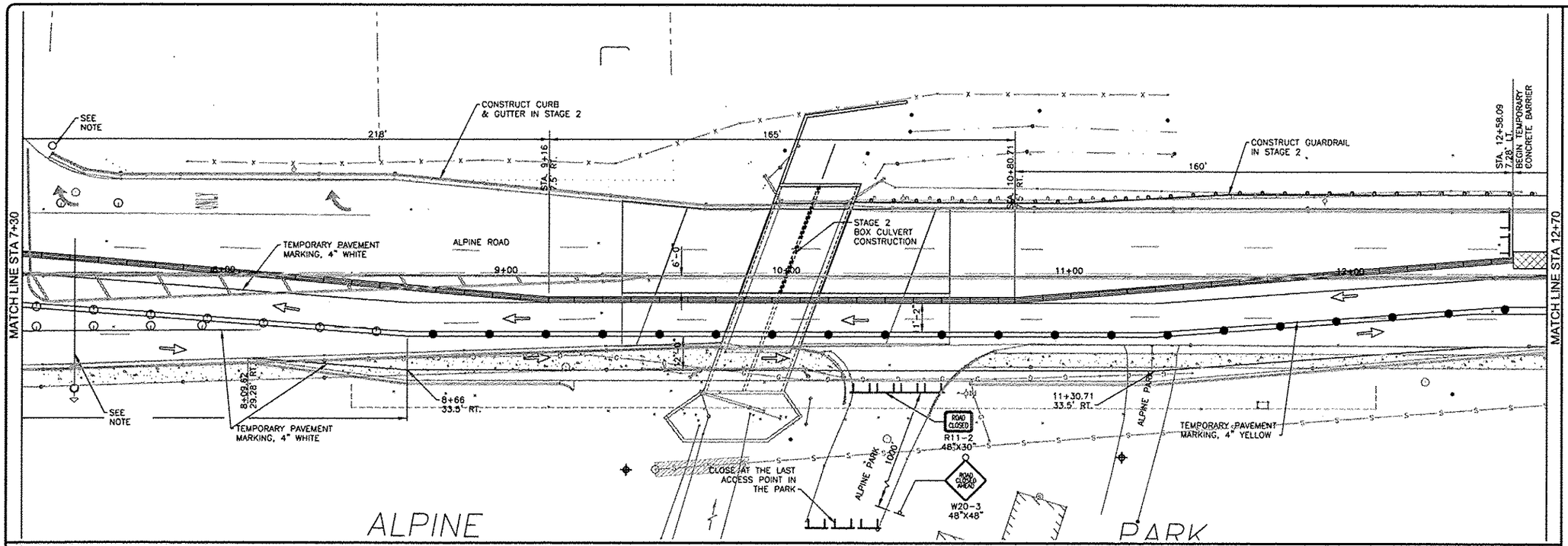
DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 2 - SHEET 2
SOUTH ALPINE ROAD

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-TC Stage 2A.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 27 of 82

85619



SCALE
20 0 20 40 FEET

STAGE 2 CONSTRUCTION SEQUENCE

1. SET UP ALL TRAFFIC CONTROL., STAGE 1 TEMPORARY PAVEMENT MARKING REMOVAL.
2. STAGE 2 PAVEMENT & BOX CULVERT REMOVAL.
3. WATER MAIN RELOCATION.
4. STAGE 2 BOX CULVERT CONSTRUCTION.
5. CONSTRUCT APPROACH SLAB, CONNECTOR PAVEMENT & BINDER COURSE.
6. REMOVE AND REPLACE WEST SIDE GUARDRAIL.
7. CONSTRUCT WEST SIDE CURB & GUTTER.

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT – SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS

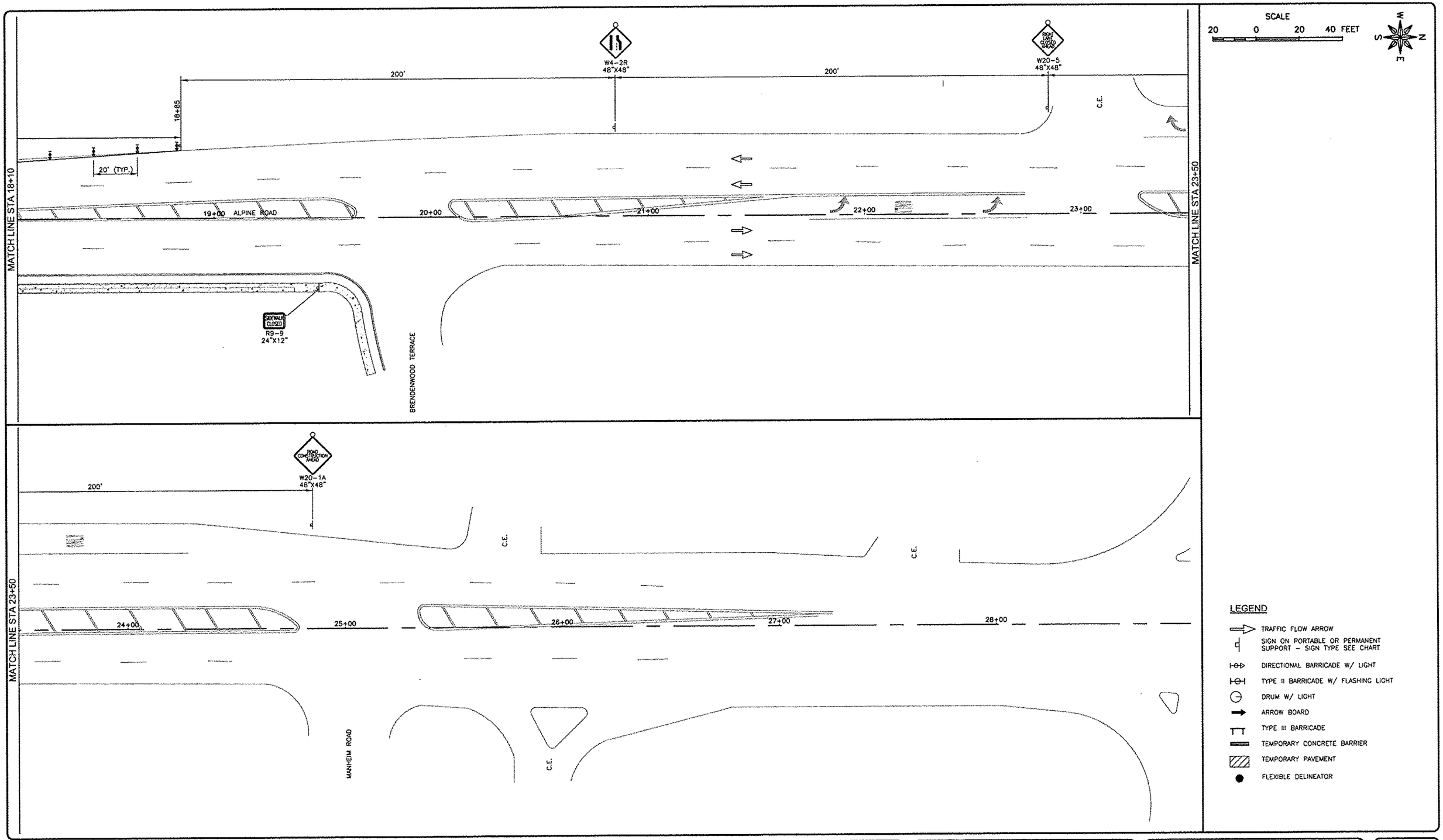
REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 2 – SHEET 3
SOUTH ALPINE ROAD

G:\Microstation\14\14-592\CADD\Plans\14-592-S-PlanDD-TC Stage 2B.dgn

JOB NUMBER: 14-592
SHEET NUMBER: 28 of 82

85619



FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 2 - SHEET 4
SOUTH ALPINE ROAD

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JOB NUMBER: 14-592

SHEET NUMBER: 29 of 82

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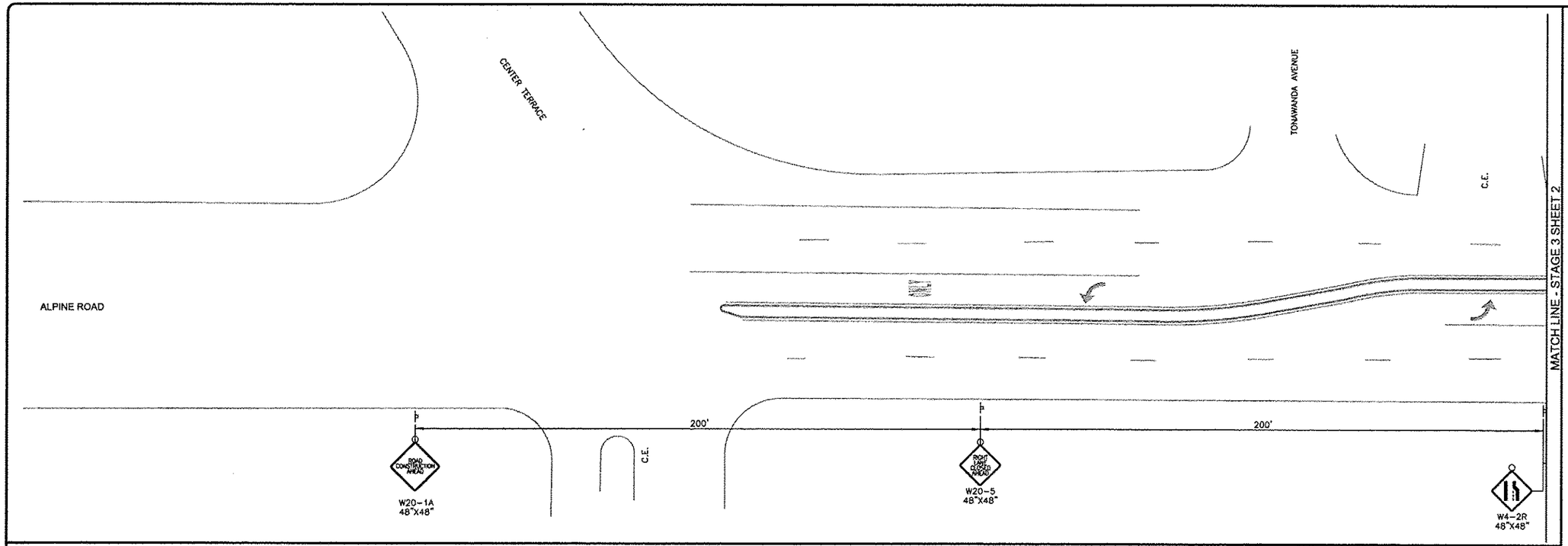

SCALE
20 0 20 40 FEET

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT – SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 3 – SHEET 1
SOUTH ALPINE ROAD

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-TC Stage 3A.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
30 of 82

85619

SCALE
20 0 20 40 FEET

MATCH LINE - STAGE 3 SHEET 1

C.E.

ALPINE ROAD

0+00

1+00

20' (TYP.)

20'

200'

320'

+69
24' RT.

TEMPORARY PAVEMENT MARKING, 4" WHITE

MATCH LINE STA 1+90

DEMPSTER AVENUE

LARSON AVE

SIDEWALK CLOSED
R9-9
24"X12"

2+00

3+00

4+00

5+00

6+00

7+00

+95
24' RT.

+60
24' RT.

TEMPORARY PAVEMENT MARKING, 4" WHITE

20' (TYP.)

ALPINE PARK

STOP
R1-1
24"X24"

SIDEWALK CLOSED
R9-9
24"X12"

292'
TAPER

MATCH LINE STA 7+30

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT - SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

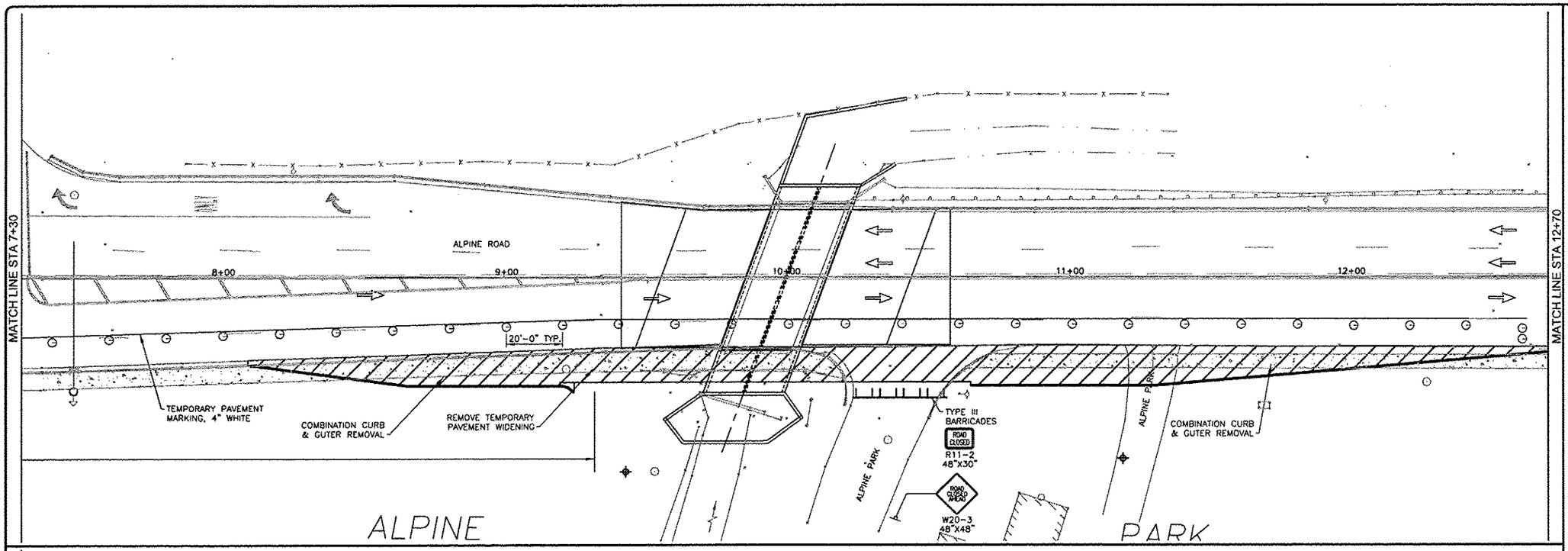
DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 3 - SHEET 2
SOUTH ALPINE ROAD

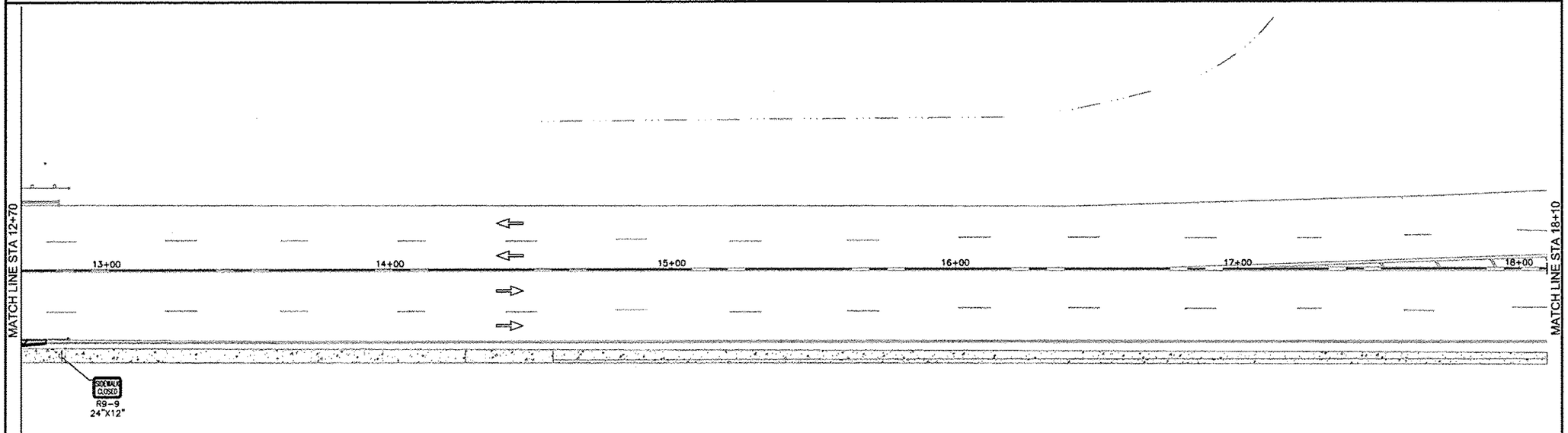
C:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-TC Stage 3A.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
31 of 82

85619





SCALE
20 0 20 40 FEET

N W S E

STAGE 3 CONSTRUCTION SEQUENCE

1. SET UP EAST SIDE TRAFFIC CONTROL. STAGE 2 TEMPORARY PAVEMENT MARKING REMOVAL.
2. REMOVE TEMPORARY PAVEMENT WIDENING, CURB AND GUTTER
3. CONSTRUCT EAST CURB & GUTTER, SIDEWALK AND DRIVEWAY PAVEMENT.
4. NOTE: ALL TRAFFIC CONTROL FOR OFF ROAD WORK (GRADING, SEEDING, GUARDRAIL ETC.), FINAL SURFACE COURSE, AND PAVEMENT MARKINGS SHALL BE PER THE APPLICABLE HIGHWAY STANDARD

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT - SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
- TYPE II BARRICADE W/ FLASHING LIGHT
- DRUM W/ LIGHT
- ARROW BOARD
- TYPE III BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY PAVEMENT
- FLEXIBLE DELINEATOR

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 3 - SHEET 3
SOUTH ALPINE ROAD

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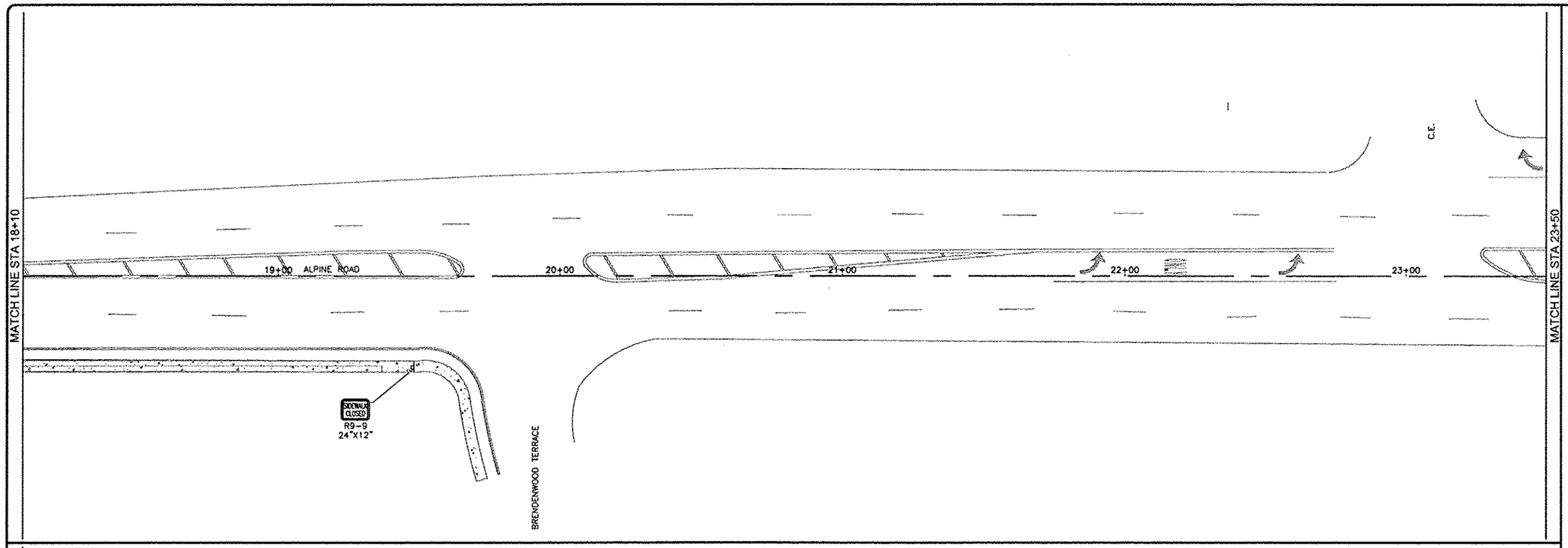
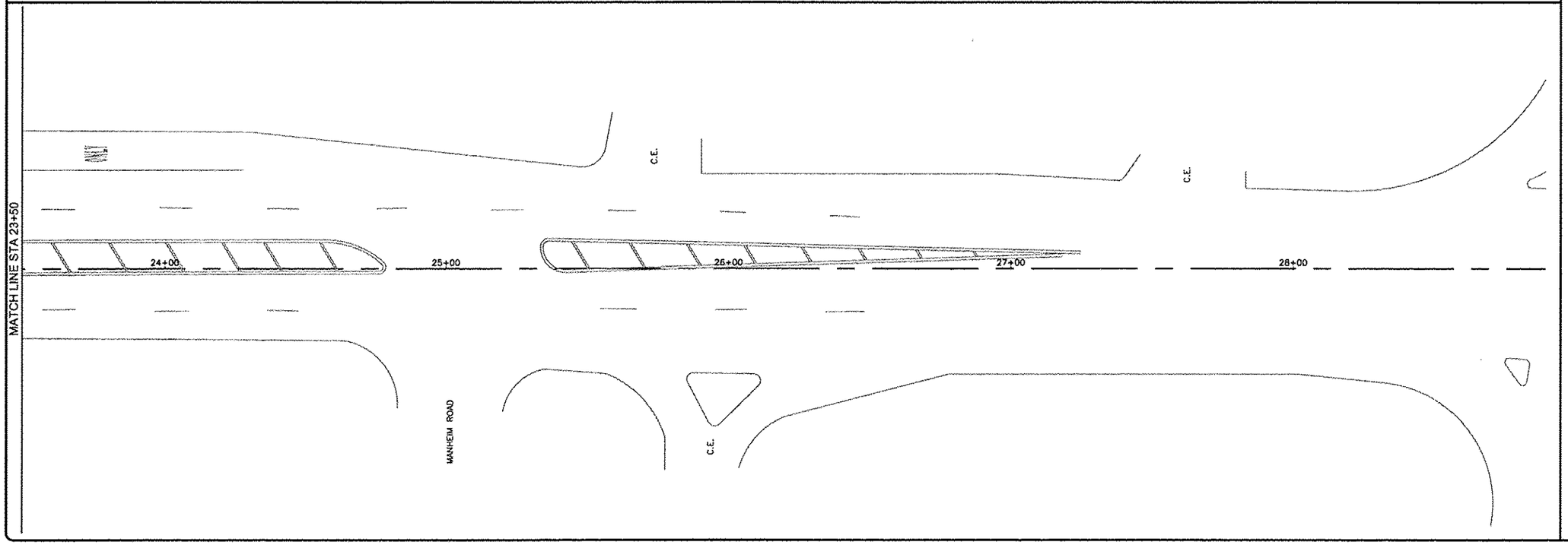
JOB NUMBER: 14-592

SHEET NUMBER: 32 of 82

85619





SCALE
20 0 20 40 FEET

N W E S

LEGEND

- TRAFFIC FLOW ARROW
- SIGN ON PORTABLE OR PERMANENT SUPPORT – SIGN TYPE SEE CHART
- DIRECTIONAL BARRICADE W/ LIGHT
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FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/5/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 3/5/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
MAINTENANCE OF TRAFFIC
STAGE 3 – SHEET 4
SOUTH ALPINE ROAD

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JOB NUMBER: 14-592

SHEET NUMBER: 33 of 82

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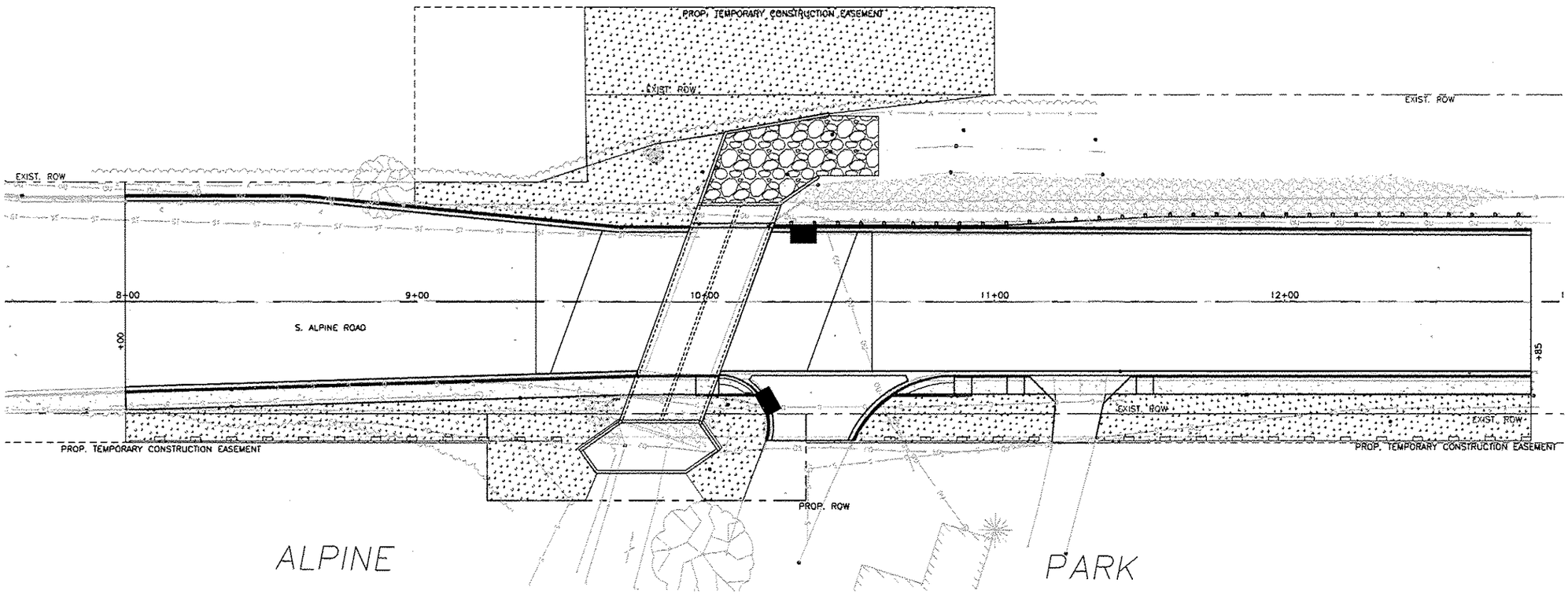

SCALE
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N W S E

EROSION CONTROL LEGEND

- SEEDING, CLASS 2A
- PERIMETER EROSION BARRIER
- STONE DUMPED RIPRAP, CLASS A5
- INLET AND PIPE PROTECTION

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 4/23/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 4/23/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
EROSION CONTROL PLAN

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JOB NUMBER:
14-592

SHEET NUMBER:
34 of 82

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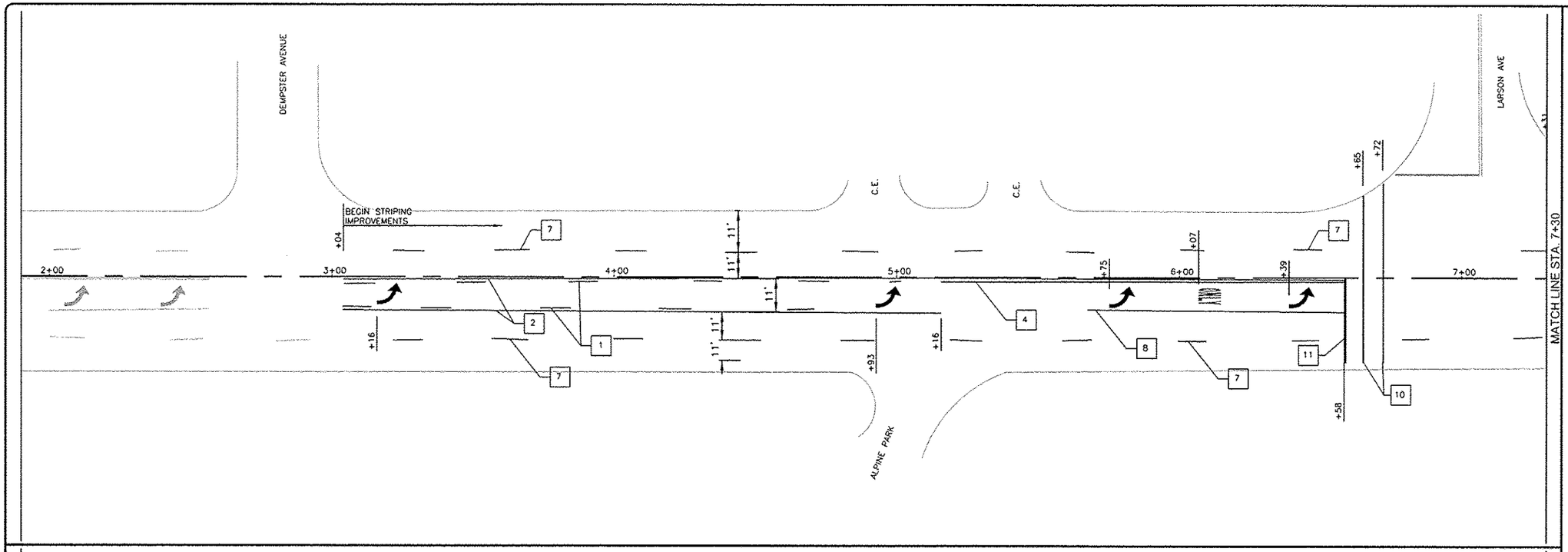

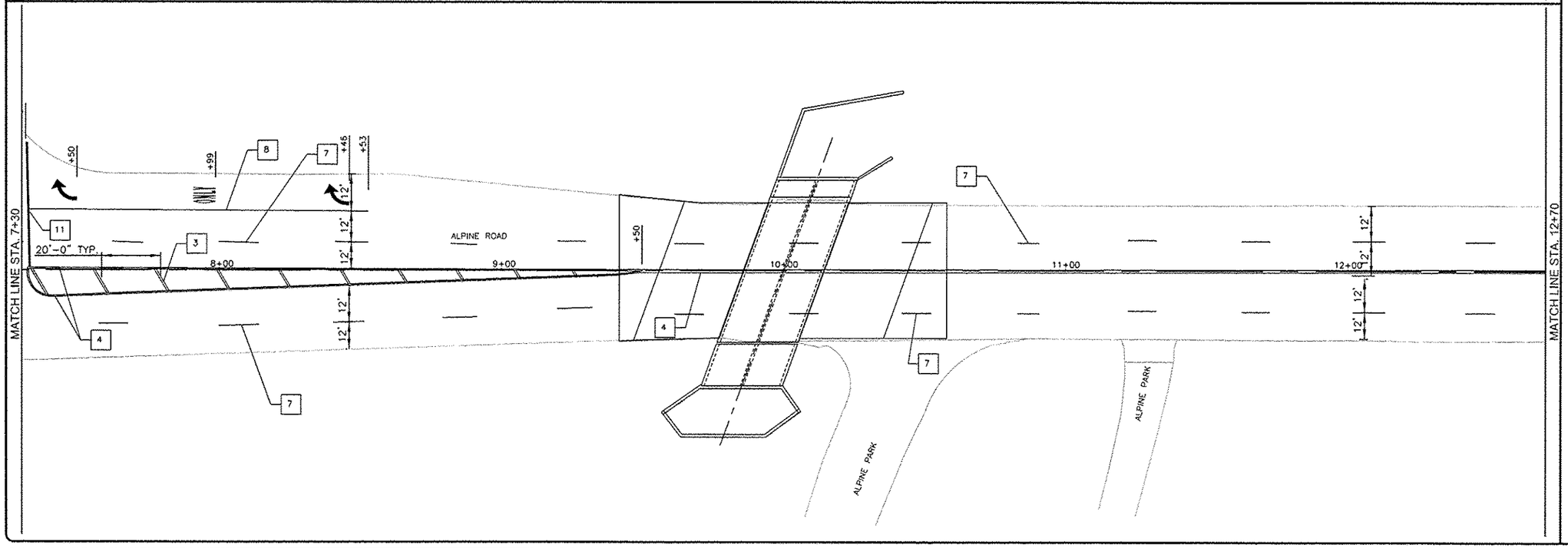

SCALE
20 0 20 40 FEET

N E S W

TYPICAL PAVEMENT MARKING LEGEND

1	4" SKIP-DASH (YELLOW)
2	4" SOLID (YELLOW)
3	12" DIAGONAL (YELLOW)
4	4" DOUBLE YELLOW
5	RESERVED
6	RESERVED
7	4" SKIP-DASH (WHITE)
8	4" SOLID (WHITE)
9	12" DIAGONAL (WHITE)
10	6" CROSS WALK (WHITE)
11	24" STOP BAR (WHITE)
12	RESERVED
13	RESERVED
14	RESERVED

NOTE:

REPLACE RAISED REFLECTIVE PAVEMENT MARKERS FROM STA. 8+00 TO STA. 12+85 PER STANDARD 781001.

QUANTITIES HAVE BEEN ESTIMATED.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
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OWNER/DEVELOPER:
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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
STRIPING PLAN – SHEET 1

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Striping plan-2.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
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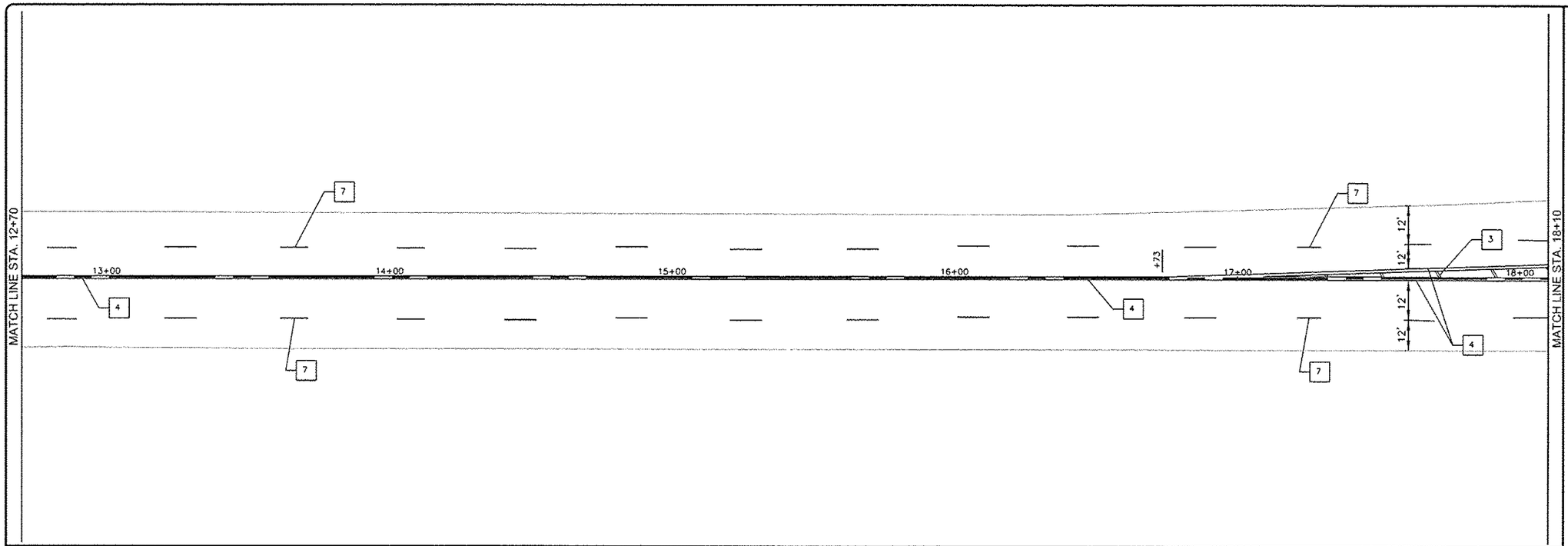
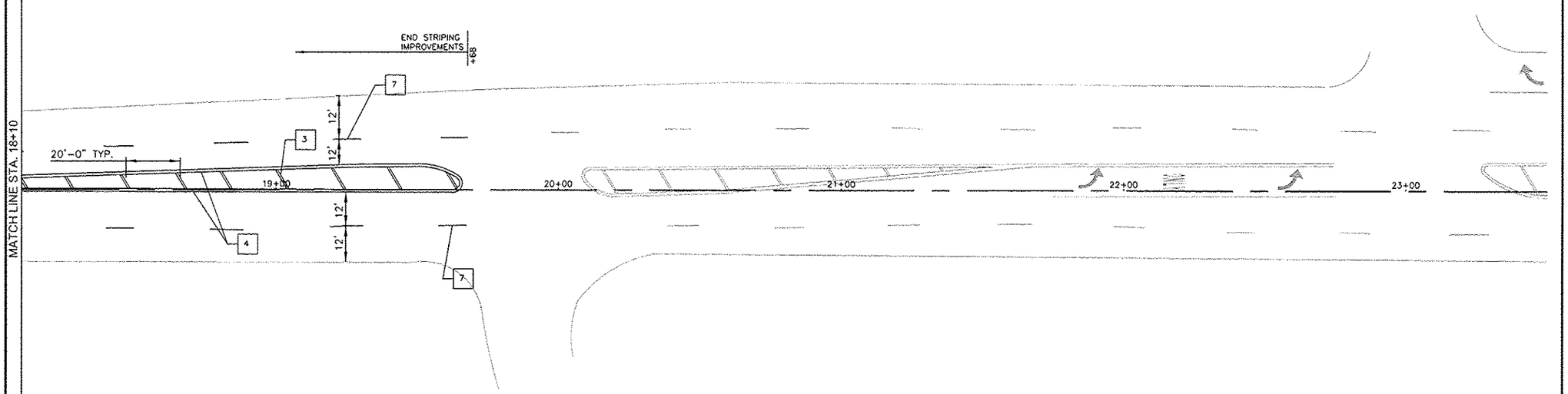
PLOT DATE: 3/3/2015

85619





SCALE
20 0 20 40 FEET

N E S W

TYPICAL PAVEMENT MARKING LEGEND

1. 4" SKIP-DASH (YELLOW)
2. 4" SOLID (YELLOW)
3. 12" DIAGONAL (YELLOW)
4. 4" DOUBLE YELLOW
5. RESERVED
6. RESERVED
7. 4" SKIP-DASH (WHITE)
8. 4" SOLID (WHITE)
9. 12" DIAGONAL (WHITE)
10. 6" CROSS WALK (WHITE)
11. 24" STOP BAR (WHITE)
12. RESERVED
13. RESERVED
14. RESERVED

NOTE:

REPLACE RAISED REFLECTIVE PAVEMENT MARKERS FROM STA. 8+00 TO STA. 12+85 PER STANDARD 781001.

QUANTITIES HAVE BEEN ESTIMATED.

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003325

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: RJT
APPROVED BY: CO
DATE: 3/3/2015
SCALE: AS SHOWN

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING:
STRIPING PLAN – SHEET 2

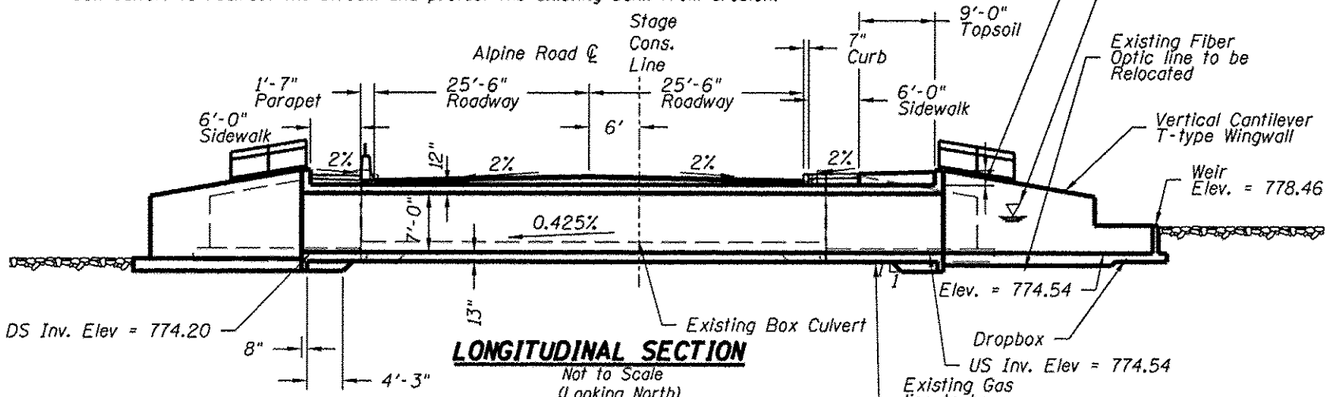
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Plan00-Striping_plan-3.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 36 of 82

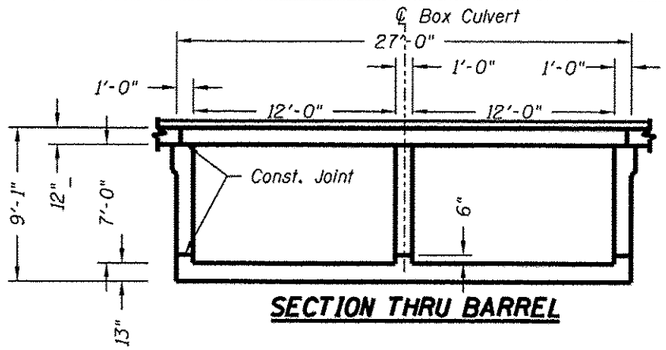
Existing Structure: S.N. 101-6065 was built in 1930, and reconstructed in 1957. It is a double-box culvert with two-10'-6" wide X 5'-9" high boxes. The structure has a skew of 20 degrees and has a total width of 55'-0" out-to-out of deck. Structure to be removed and replaced. Traffic to be maintained utilizing stage construction.

Proposed Structure: S.N. 101-6159 replaces the existing box culvert at Alpine Road over South Branch of Keith Creek in Rockford. The proposed structure will include a 48'-0" wide roadway, a 6' wide sidewalk on the east side and a 6' wide sidewalk on the west side; utilizing two-12'-0" wide X 7'-0" high box culverts. The existing weir will be replaced on the east side of the structure. A retaining wall will be constructed on the west side of the box culvert to redirect the stream and protect the existing bank from erosion.



LONGITUDINAL SECTION

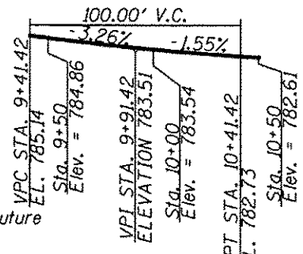
Not to Scale
(Looking North)
Dimensions are at Right Angles to ℄ Roadway



SECTION THRU BARREL

DESIGN SCOUR ELEVATION

Design Scour Elevation (ft.)
Upstream - 771.54
Downstream - 771.20



PROFILE GRADE

HIGHWAY CLASSIFICATION

F.A.P. Rte 412
Functional Class: Other Principal Arterial
ADT: 27,600 (2012) ; 29,632 (2032)
Design Speed: 45 mph
Posted Speed: 45 mph

LOADING HL93

Allow 50#/sq.ft. for future wearing surface

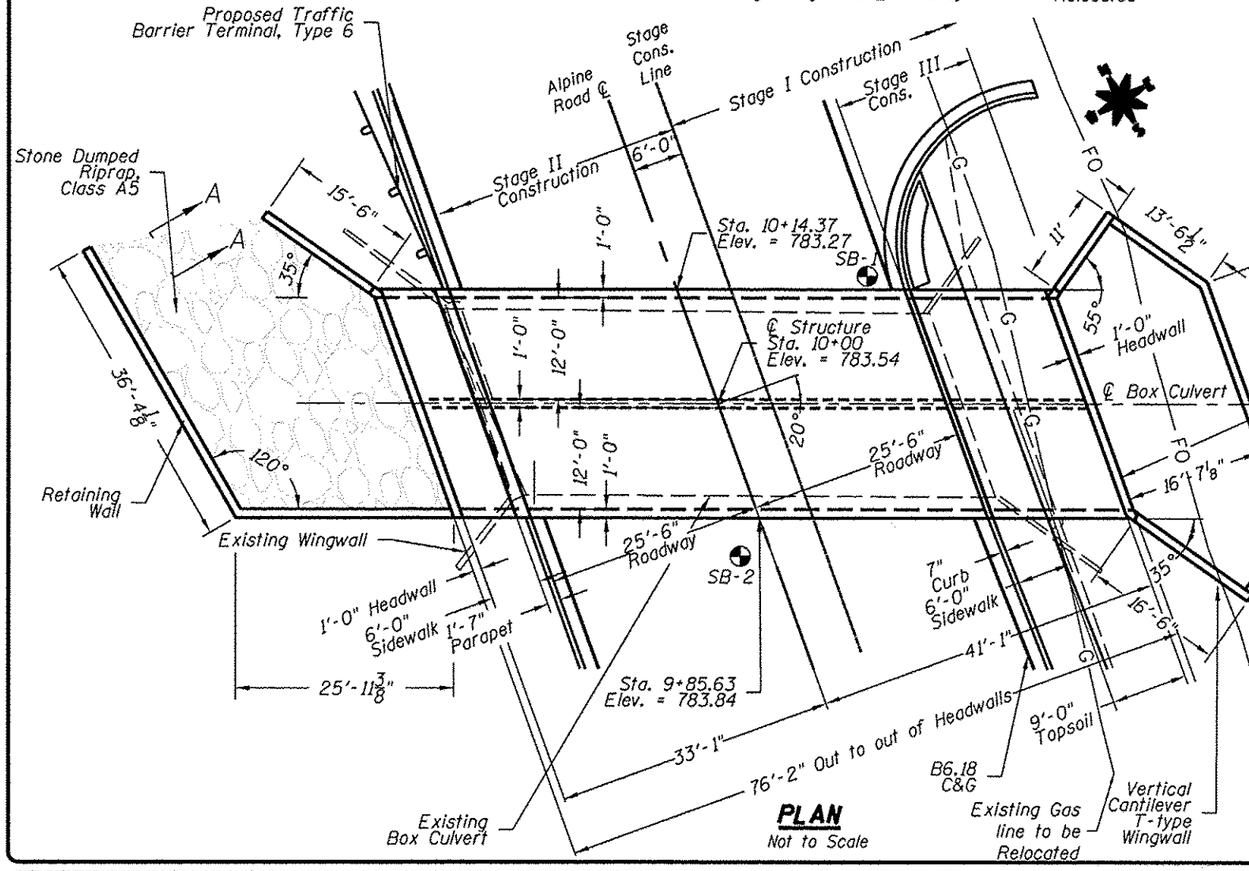
DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

WATERWAY INFORMATION									
Drainage Area = 2.76 sq. mi.			Existing Low Grade Elev. 780.64 @ Sta. 10+26.01 Proposed Low Grade Elev. 782.63 @ Sta. 10+26.01						
Flood	Freq. Yr.	Q (C.F.S.)	Opening Sq. Ft.		Nat H.W.E.	Head - Ft.		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
	10	714		95.52	778.38			778.38	778.38
Design	50	1151	100.4	126.5	779.67	0.19	0.07	779.86	779.74
Base	100	1349	109.0	136.3	780.08	1.26	0.47	781.34	780.55
	500	1838		219.84	783.56			783.56	783.56



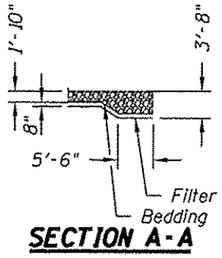
PLAN

Not to Scale

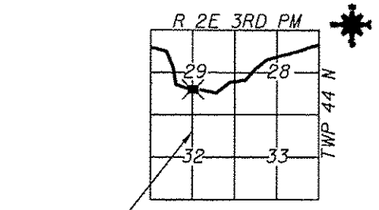
STRUCTURE NO. 101-6159
SEC. 14-00610-00-BR BUILT 201X
F.A.P. Rte 412
WINNEBAGO COUNTY
LOADING HL-93

NAME PLATE

See Std. 515001



SECTION A-A



LOCATION SKETCH

LICENSED STRUCTURAL ENGINEER
KEITH E. BRANDAU
81-4905
CHAMPAIGN
STATE OF ILLINOIS

2/27/2015
KEITH E. BRANDAU DATE
LICENSE EXPIRES 11/30/2016

GENERAL PLAN AND ELEVATION
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS IOWA WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD 425 EAST STATE STREET ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 2/27/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING: GENERAL PLAN AND ELEVATION

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert GP&E.dgn

JOB NUMBER: 14-592
SHEET NUMBER: 37 of 82

PLOT DATE: 2/27/2015

INDEX OF SHEETS

1	General Plan & Elevation
2	General notes and Bill of Materials
3	Staged Construction and Sections
4-5	Typical Sections
6-7	Box Culvert Structural Details
8-9	Dropbox Details
10-12	Retaining Wall
13	Parapet Details
14	Bicycle and Parapet Rail, Concrete Curb Details
15	Bicycle Railing
16-19	Approach Slab Details
20	Bar Splicer Assembly
21	Temporary Barrier
22	Boring Logs

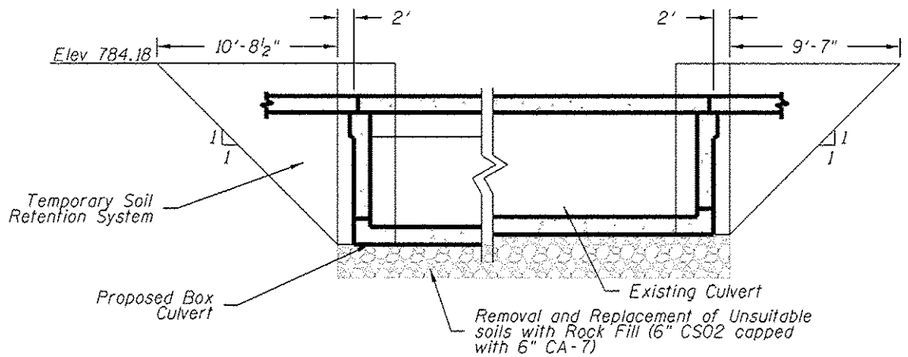
GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
2. Reinforcement bars designated (E) shall be epoxy coated.
3. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
4. All construction joints shall be bonded.
5. A waterproofing membrane shall be applied to the bonded construction joint on the outside walls between Stage 1 and 2. This work shall be incidental to Concrete Box Culvert.
6. Reinforcement bars shall be lapped a minimum as shown on the plans where splices occur. Radius bars shall be factory bent and delivered to the site with the approximate radius. Field bending shall only be allowed to achieve form clearance.
7. Install expansion joints in parapet walls over interior culvert walls.
8. Bottom slab, walls, top slab will be paid for as Concrete Box Culvert. Parapet wall and Approach Slab shall be paid for as Concrete Superstructure. Dropbox, Retaining Wall and Approach Footing will be paid for as Concrete Structures.

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures	Each	1		1
Concrete Superstructures	Cu. Yd.	147.6		147.6
Concrete Structures	Cu. Yd.		145.8	145.8
Reinforcement Bars	Pound	62220		62220
Reinforcement Bars, Epoxy Coated	Pound	41510		41510
Protective Coat	Sq. Yd.	507.2		507.2
Name Plates	Each	1		1
Structure Excavation	Cu. Yd.		354.0	354.0
Granular Backfill for Structures	Cu. Yd.		334.2	334.2
Stone Dumped Riprap, Class A5	Sq. Yd.		143	143
Bar Splicers	Each	283		283
Temporary Soil Retention System	Sq. Ft.		200.0	200.0
Removal and disposal of unsuitable material for structures	Cu. Yd.		23	23
Concrete Box Culverts	Cu. Yd.		266.1	266.1
Bicycle Railing	Foot	94.0		94.0
Parapet Railing	Foot	25.0		25.0
Conduit embedded in structure, 3" dia., PVC	Foot	29.0		29.0
Geocomposite Wall Drain	Sq. Yd.		103.9	103.9
Rock Excavation for Structures	Cu. Yd.		19.7	19.7
Concrete Curb, Type B (Special)	Foot	29.0		29.0
Rock Fill	Ton		210.0	210.0

** See Roadway plans for quantities of temporary concrete barrier, earth excavation and parapet removal.



TEMPORARY SOIL RETENTION SYSTEM

TEMPORARY SOIL RETENTION SYSTEM AT STAGE CONSTRUCTION LINE

1. Existing 24" and 36" Storm Sewers are cast into the south wall of the existing box culvert. Care shall be exercised in removing and relaying of the sewer.
2. The Contractor shall maintain drainage flows throughout the period of construction.
3. Temporary Soil Retention System shall be provided by the Contractor. See special provisions for submittal requirements. A portion of the Temporary Soil Retention System will be removed for Stage 2 construction. No additional compensation shall be allowed for this adjustment.

GENERAL NOTES AND BILL OF MATERIALS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING: GENERAL PLAN AND ELEVATION

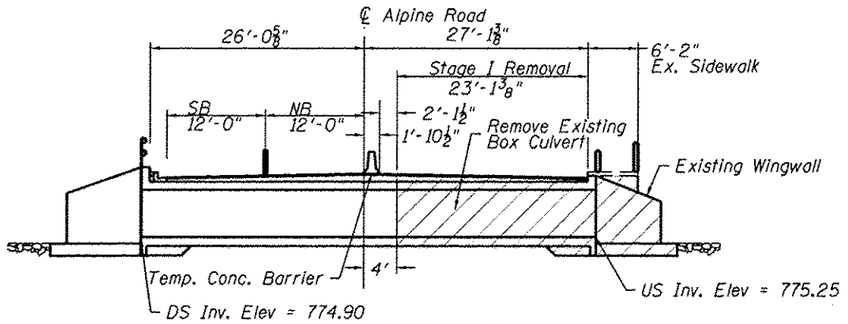
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert GPAE - 2.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 38 of 82

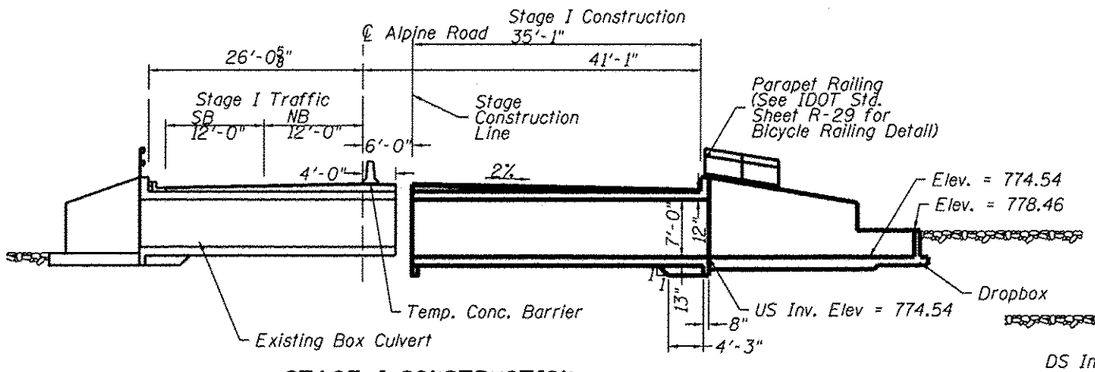
PLOT DATE: 3/3/2015

85619



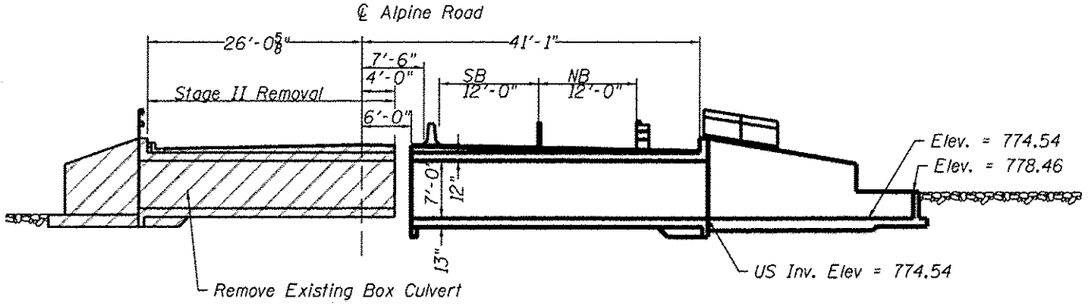
STAGE I REMOVAL

(Looking North)
Dimensions are at Right Angles to ℄ Roadway



STAGE I CONSTRUCTION

(Looking North)
Dimensions are at Right Angles to ℄ Roadway



STAGE II REMOVAL

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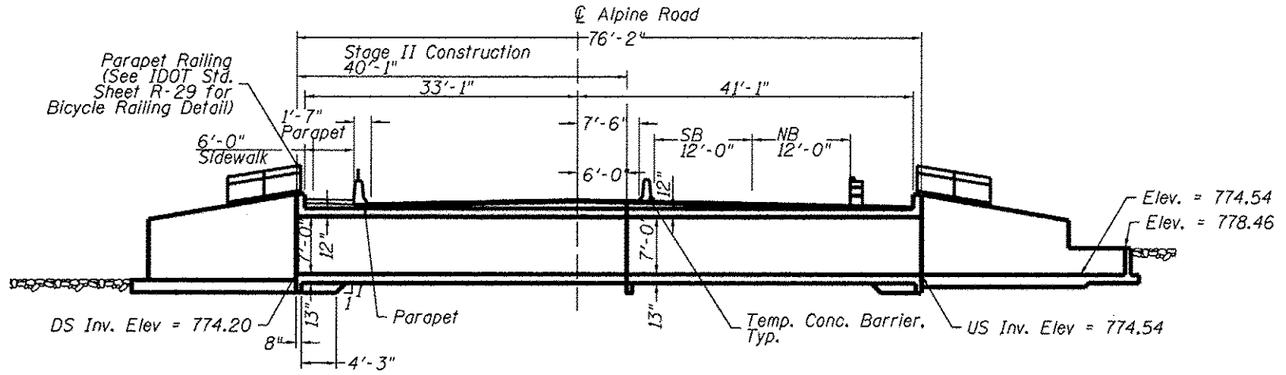
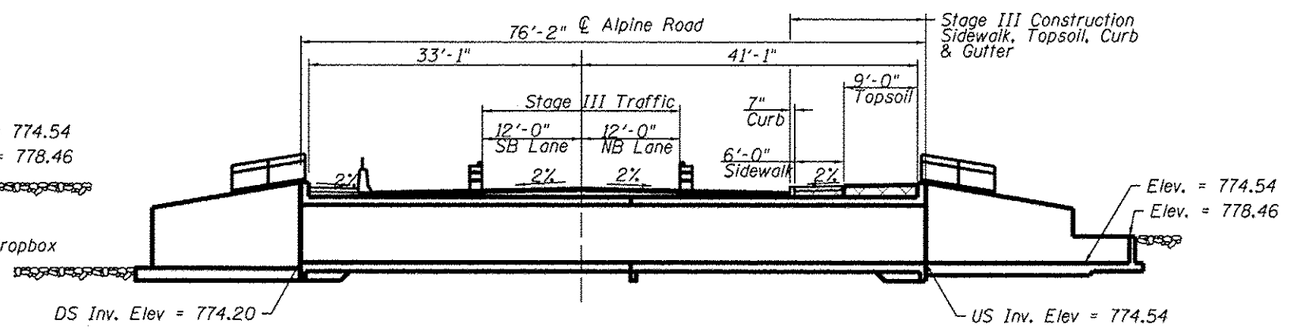


STAGE II CONSTRUCTION

(Looking North)
Dimensions are at Right Angles to ℄ Roadway



STAGE III CONSTRUCTION

(Looking North)
Dimensions are at Right Angles to ℄ Roadway

STAGE CONSTRUCTION NOTES

1. Hatched areas indicate removal.
2. Removal of existing steel railing is included with removal of existing structures.

STAGED CONSTRUCTION AND SECTIONS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/5/2015
SCALE: NTS

REVISIONS

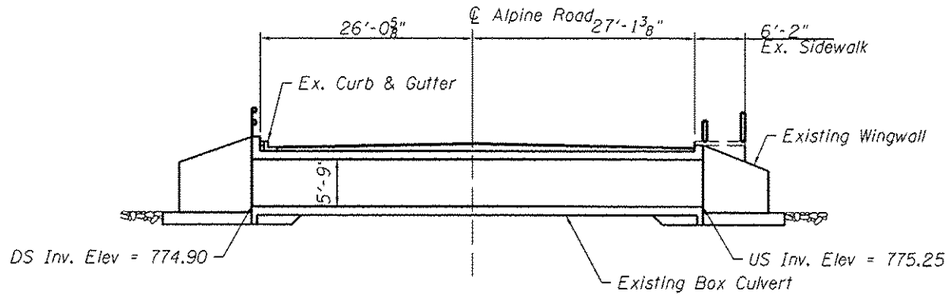
REV. NO.	DESCRIPTION	DATE

DRAWING:
BOX CULVERT STAGED CONSTRUCTION

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert MOT.dgn

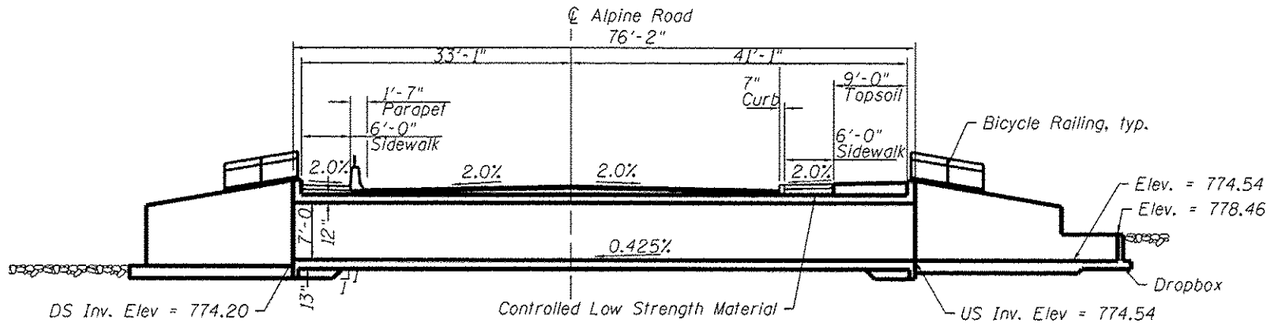
JOB NUMBER: 14-592
SHEET NUMBER: 39 of 82

PLOT DATE: 3/5/2015



EXISTING TYPICAL SECTION

Sta. 9+88.40 to Sta. 10+11.60
(Looking North)
Dimensions are at Right Angles to ℄ Roadway



PROPOSED TYPICAL SECTION

Sta. 9+85.63 to Sta. 10+14.37
(Looking North)
Dimensions are at Right Angles to ℄ Roadway

TYPICAL SECTIONS
ALPINE ROAD OVER SOUTH
BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: CM
APPROVED BY: CMO
DATE: 3/3/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
BOX CULVERT TYPICAL SECTIONS

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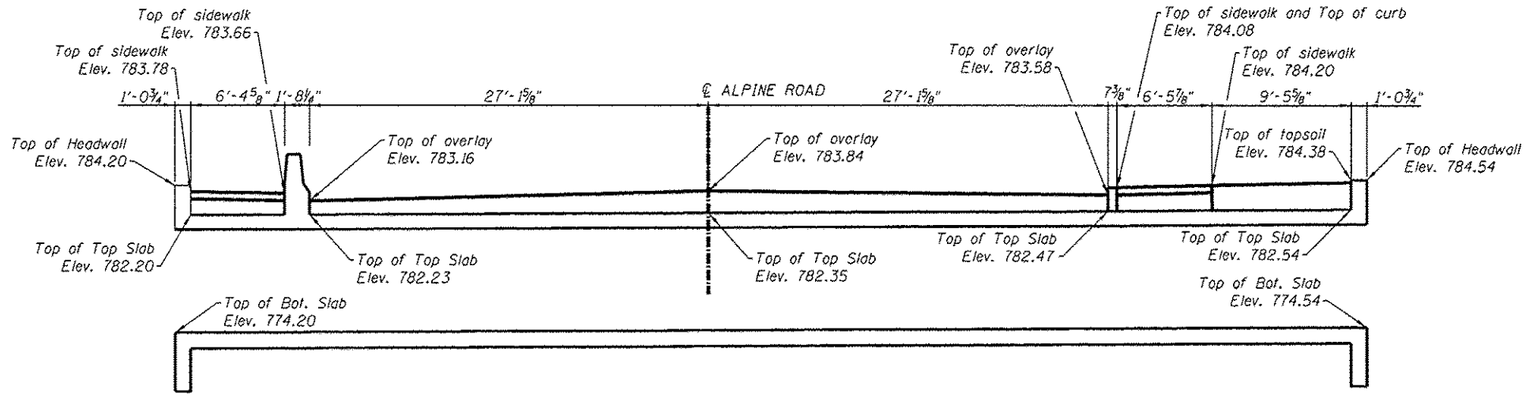
JOB NUMBER:
14-592

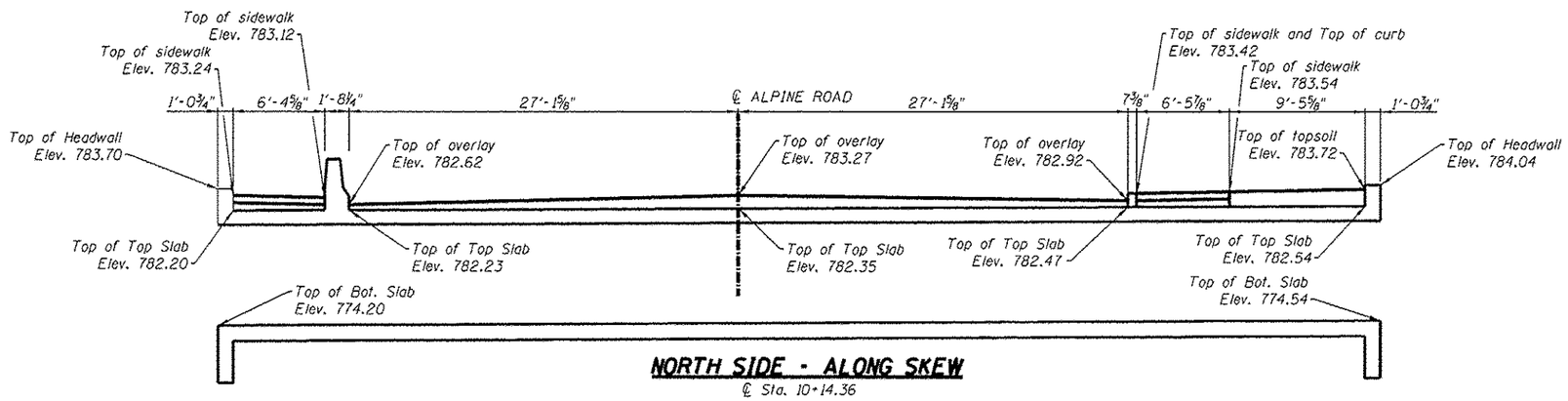
SHEET NUMBER:
40 of 82



SOUTH SIDE - ALONG SKEW

℄ Sta. 9+85.64

NOTE: DIMENSIONS SHOWN ARE PARALLEL TO BOX CULVERT
DO NOT USE FOR CROSS SLOPE



NORTH SIDE - ALONG SKEW

℄ Sta. 10+14.36

NOTE: DIMENSIONS SHOWN ARE PARALLEL TO BOX CULVERT
DO NOT USE FOR CROSS SLOPE

CROSS SECTION ON SKEW
ALPINE ROAD OVER KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CO
DATE: 3/3/2015
SCALE: 1"=5'-0"

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
BOX CULVERT
SECTIONS ALONG SKEW

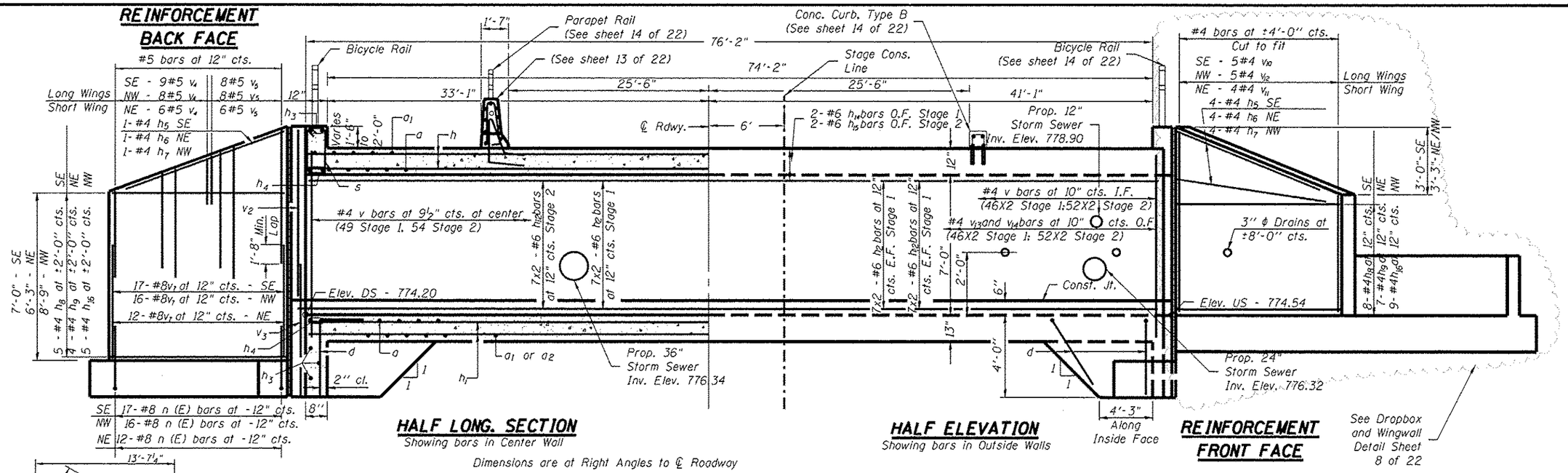
G:\Microstation\14\14-592\C400\Plans\14-592-S-Pln00-Typical Section Sheet.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
41 of 82

85619

REINFORCEMENT BACK FACE



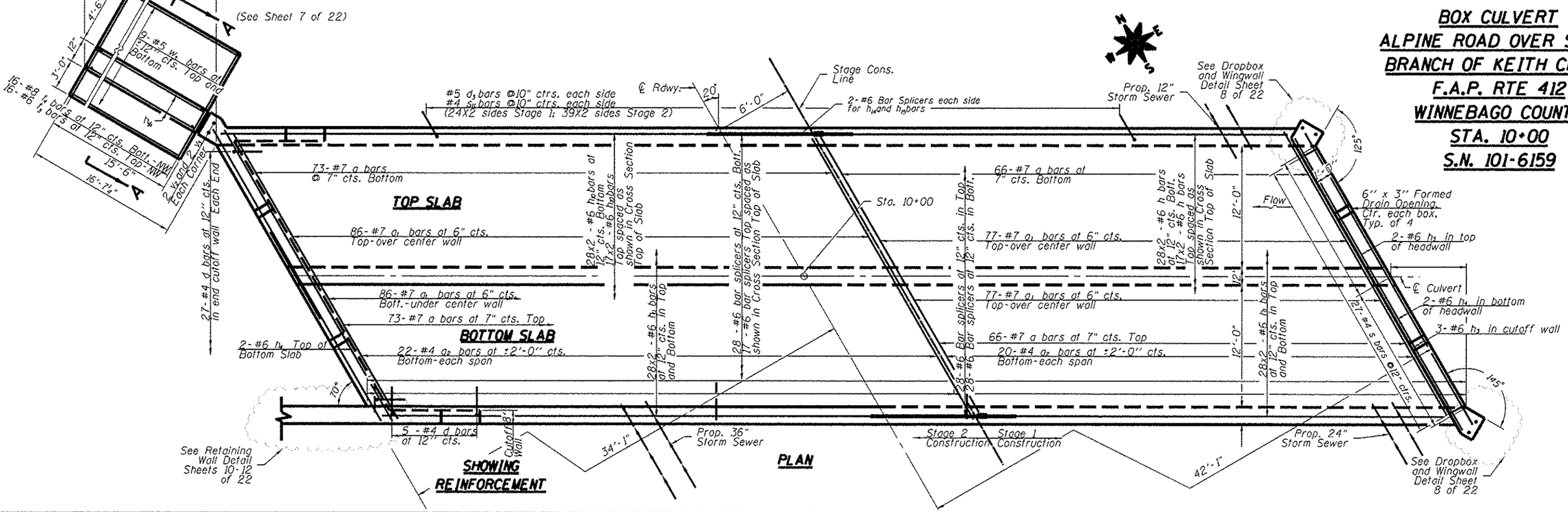
HALF LONG. SECTION
Showing bars in Center Wall

HALF ELEVATION
Showing bars in Outside Walls

REINFORCEMENT FRONT FACE

See Dropbox and Wingwall Detail Sheet 8 of 22

Dimensions are at Right Angles to ℄ Roadway



SHOWING REINFORCEMENT

PLAN

BOX CULVERT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD, 425 EAST STATE STREET, ROCKFORD, IL 6104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT, ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK, ROCKFORD, IL 6108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING: BOX CULVERT STRUCTURAL DETAILS

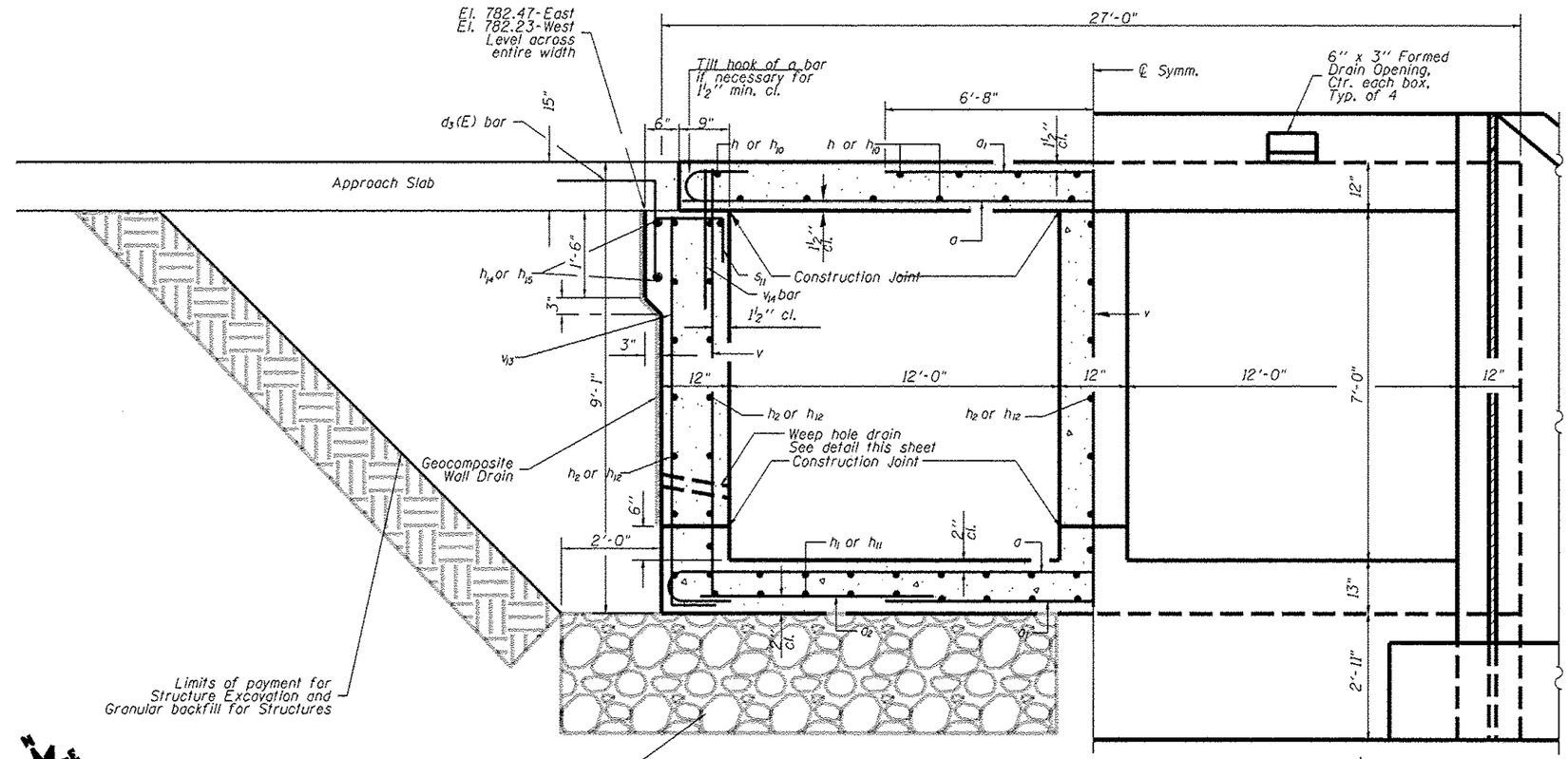
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert Structural Details-2.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 42 of 82

PLOT DATE: 3/3/2015

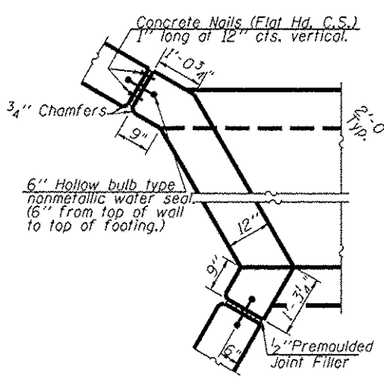
85619



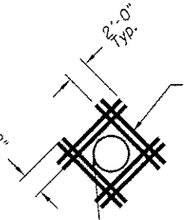
HALF SECTION THRU BARREL

HALF END ELEVATION

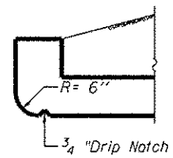
Notes:
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.



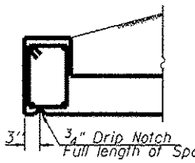
CORNER DETAIL



STORM SEWER OPENING REINFORCEMENT

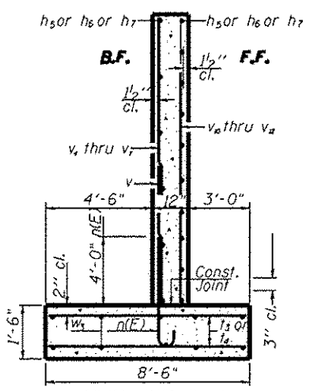


AT UPSTREAM END

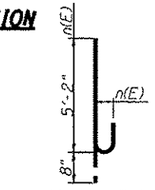


AT DOWNSTREAM END

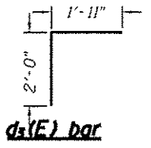
DRAIN DETAIL



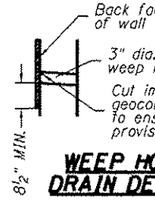
SECTION A-A



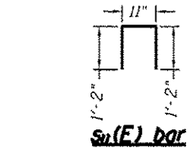
BAR n(E)



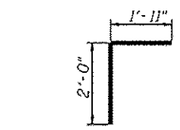
d3(E) bar



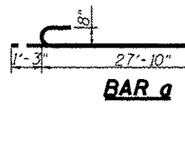
WEEP HOLE DRAIN DETAIL



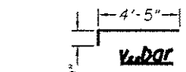
S11(E) Bar



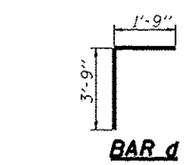
BAR d3



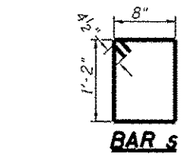
BAR a



V4 Bar



BAR d



BAR s

BILL OF MATERIAL

Bar	Qty	Size	Length (ft)	Shape
a	278	#7	30'-4"	
a1	326	#7	13'-4"	
a2	84	#4	9'-3"	
b1	16	#4	7'-4"	
b2	16	#4	8'-4"	
b3	16	#4	9'-4"	
d	74	#4	5'-6"	
d3	126	#5	3'-11"	
h	90	#6	20'-6"	
h1	112	#6	20'-6"	
h2	70	#6	20'-6"	
h3	10	#6	28'-3"	
h4	8	#6	28'-3"	
h5	5	#4	16'-2"	
h6	5	#4	11'-0"	
h7	5	#4	15'-4"	
h8	13	#4	16'-2"	
h9	11	#4	10'-8"	
h10	90	#6	22'-9"	
h11	112	#6	22'-9"	
h12	70	#6	22'-9"	
h14	4	#6	19'-2"	
h15	4	#6	31'-2"	
h16	14	#4	15'-2"	
n[E]	45	#8	5'-10"	
s	54	#4	4'-5"	
s11	126	#4	3'-3"	
t3	16	#6	8'-2"	
t4	16	#8	8'-2"	
v	299	#4	8'-9"	
v2	8	#4	7'-6"	
v3	8	#4	5'-10"	
v4	23	#5	4'-9"	
v5	22	#5	7'-4"	
v7	45	#8	6'-0"	
v10	5	#4	9'-8"	
v11	4	#4	9'-2"	
v12	5	#4	11'-8"	
v13	196	#4	7'-9"	
v14	196	#4	3'-0"	
w3	18	#5	15'-2"	
Reinforcement Bars			lbs	52520
Reinforcement Bars, Epoxy Coated			lbs	700
Concrete Box Culverts			Cu. Yd.	266.1

BOX CULVERT STRUCTURAL DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

DB-T-L 7-1-10

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-005525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD, 425 EAST STATE STREET, ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT, ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK, ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING: BOX CULVERT STRUCTURAL DETAILS

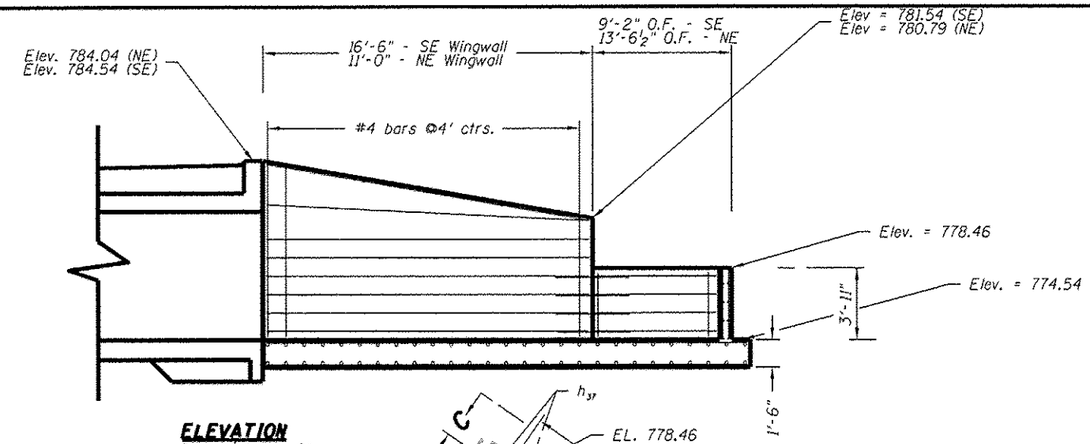
G:\Microstation\14\14-592\C400\Plans\14-592-S-Box Culvert StructuralDetails.dgn

JOB NUMBER: 14-592

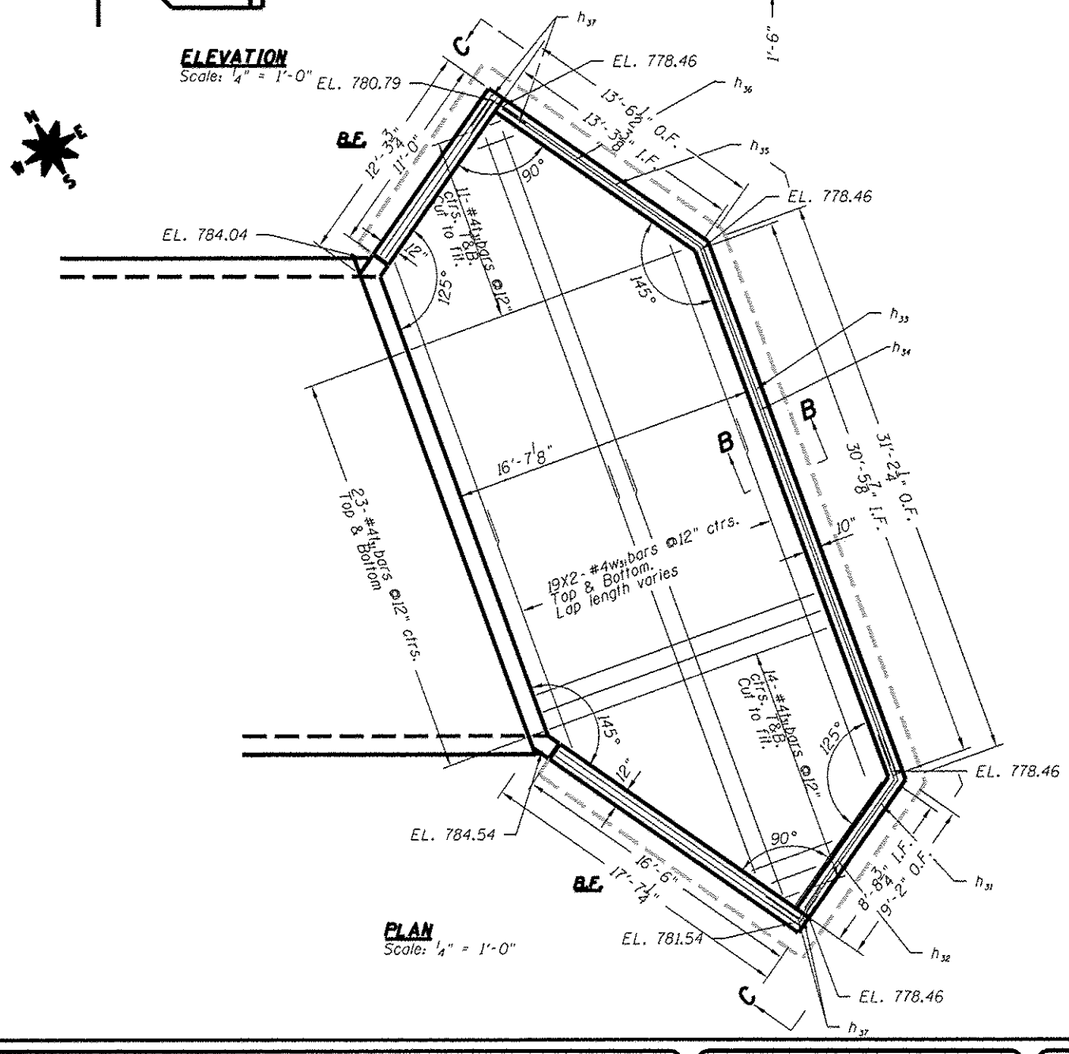
SHEET NUMBER: 43 of 82

PLOT DATE: 3/3/2015

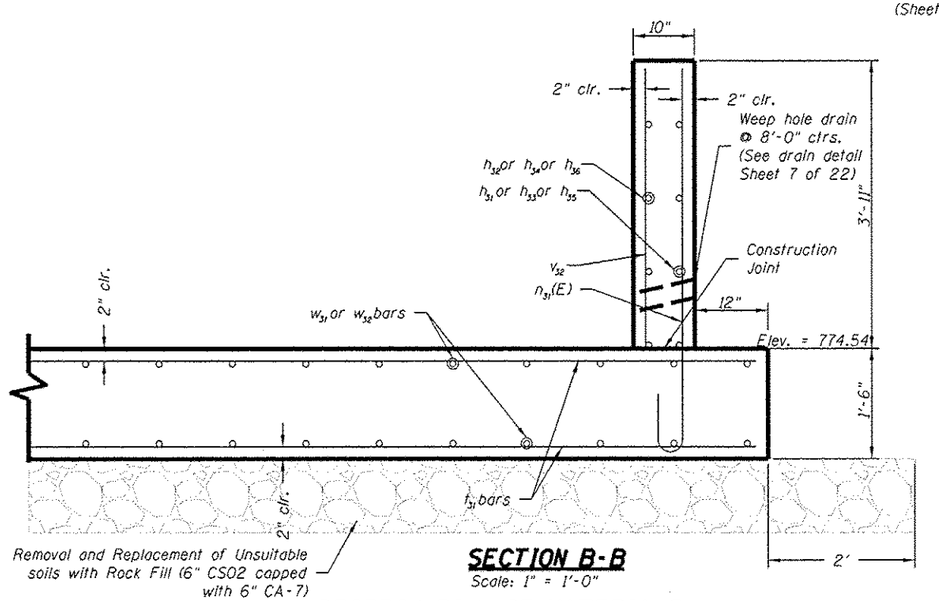
85619



ELEVATION
Scale: 1" = 1'-0"



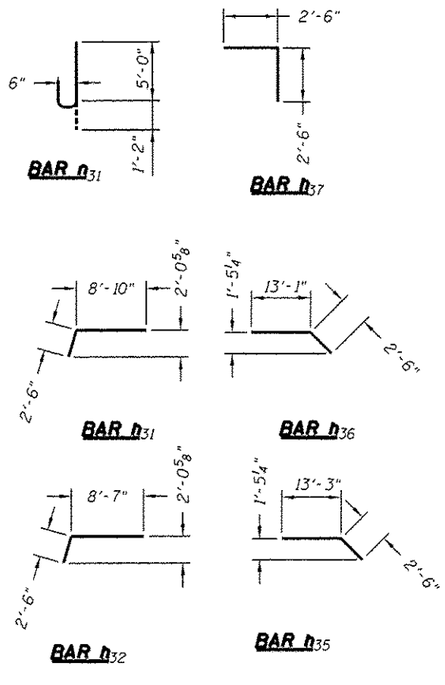
PLAN
Scale: ¼" = 1'-0"



SECTION B-B
Scale: 1" = 1'-0"

DROPBOX BILL OF MATERIALS

Bar	Qty	Size	Length (ft)	Shape
h31	4	#4	11'-4"	
h32	4	#4	11'-1"	
h33	4	#4	30'-8"	
h34	4	#4	29'-10"	
h35	4	#4	15'-9"	
h36	4	#4	15'-7"	
h37	16	#4	5'-0"	
n31[E]	56	#4	6'-2"	
t31	96	#4	18'-1"	
v32	54	#4	2'-11"	
w31	76	#4	27'-0"	
Reinforcement Bars			lbs	3000
Reinforcement Bars, Epoxy Coated			lbs	230
Concrete Structures			Cu. Yd.	49.6



BAR n_{31} BAR n_{37} BAR n_{31} BAR n_{36} BAR n_{32} BAR n_{35}

(Work Sheets 8 & 9 of 22 together)

DROPBOX DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS IOWA WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD 425 EAST STATE STREET ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: AS SHOWN

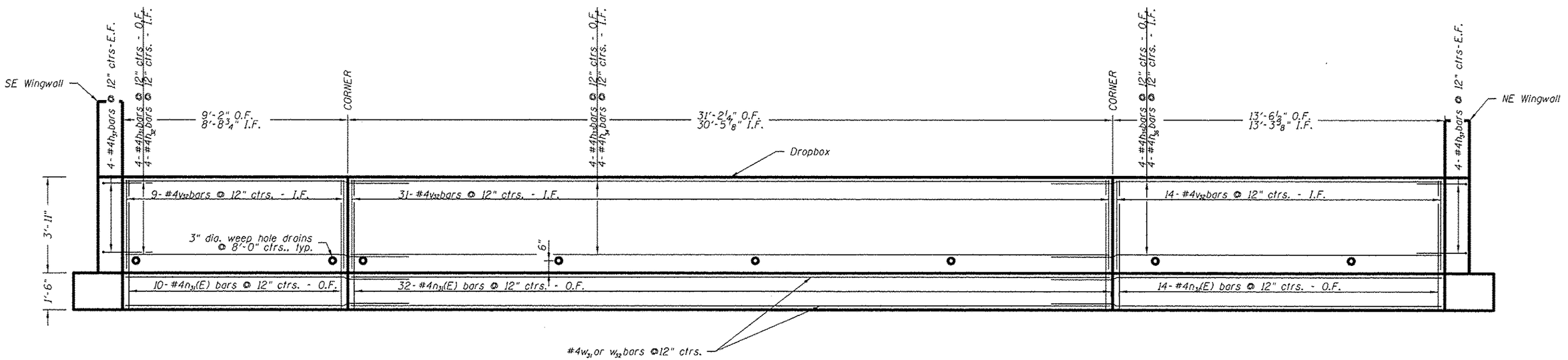
REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING: DROPBOX & WINGWALLS STRUCTURAL DETAILS

G:\Microstation\14\14-592\C400\Plans\14-592-S-Box Culvert Dropbox.dgn

JOB NUMBER: 14-592
SHEET NUMBER: 44 of 82

PLOT DATE: 3/3/2015



EXPANDED ELEVATION C-C

(Looking west)

(Work Sheets 8 & 9 of 22 together)

DROPBOX DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: 1/2"=1'-0"

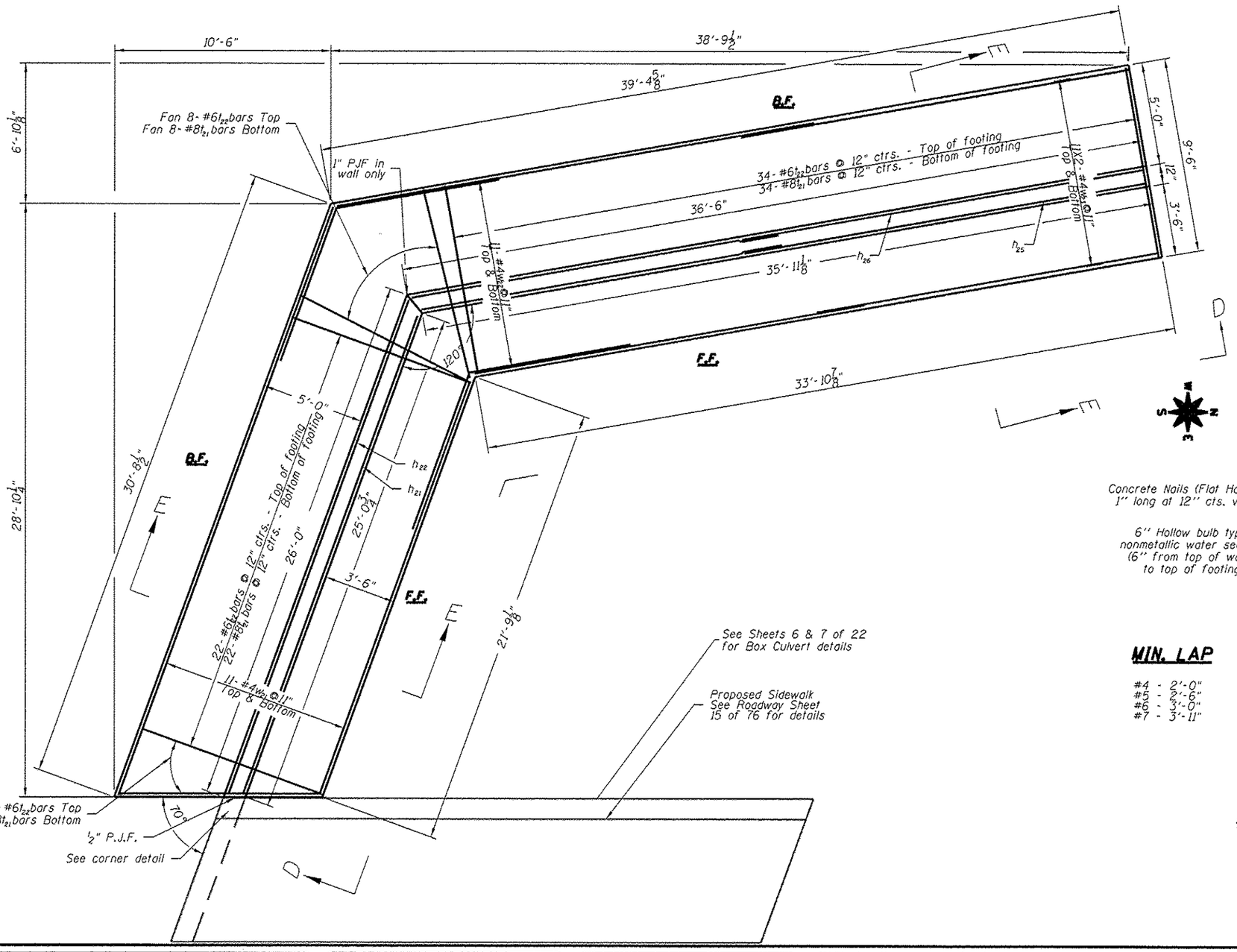
REVISIONS		
REV. NO.	DESCRIPTION	DATE

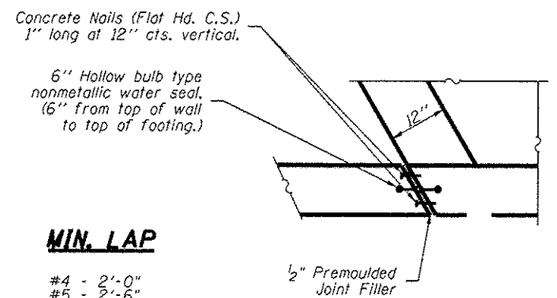
DRAWING:
DROPBOX & WINGWALLS
STRUCTURAL DETAILS

D:\Microstation\14\14-592\C400\Plans\14-592-S-Box Culvert Dropbox 2.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 45 of 82





MIN. LAP

#4 - 2'-0"
#5 - 2'-6"
#6 - 3'-0"
#7 - 3'-11"

CORNER DETAIL

(Work Sheets 10, 11 & 12 of 22 together)

RETAINING WALL
ALPINE ROAD OVER KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: 3/8" = 1'-0"

REVISIONS

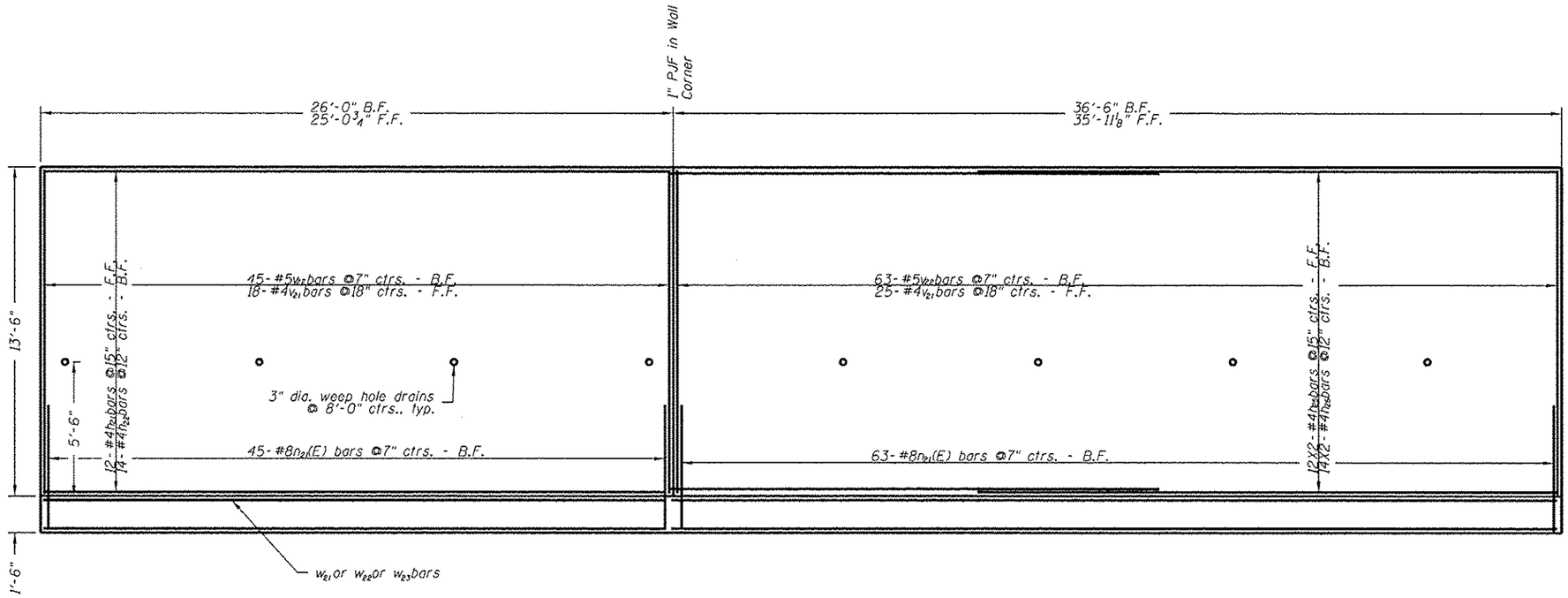
REV. NO.	DESCRIPTION	DATE

DRAWING:
RETAINING WALL DETAILS

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Retaining Wall- 2.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 46 of 82



EXPANDED ELEVATION D-D

(Work Sheets 10, 11 & 12 of 22 together)

RETAINING WALL
ALPINE ROAD OVER KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: 3/4" = 1'-0"

REVISIONS

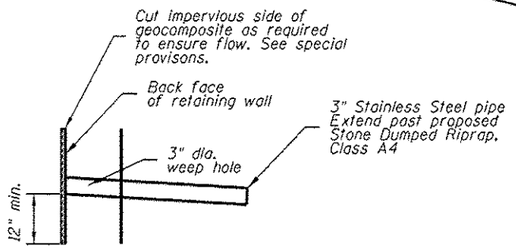
REV. NO.	DESCRIPTION	DATE

DRAWING:
RETAINING WALL DETAILS

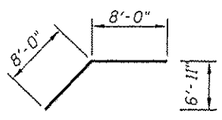
C:\Microstation\14\14-592\CADD\Plans\14-592-S-Retaining Wall- 4.dgn

JOB NUMBER: 14-592

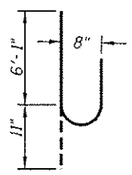
SHEET NUMBER: 47 of 82



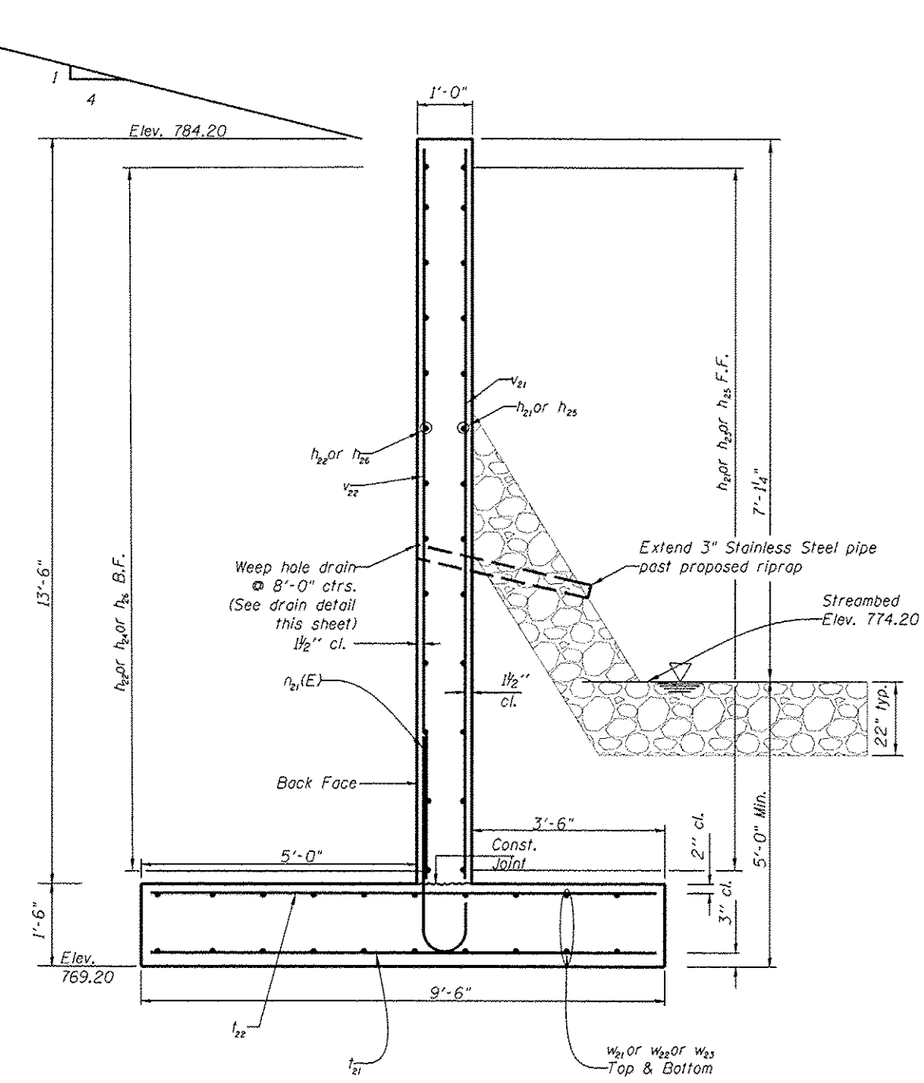
WEEP HOLE DRAIN DETAIL



BAR w_{22}



BAR $n_{21}(E)$



SECTION E-E

MIN. LAPS

#4 - 2'-0"
#5 - 2'-6"
#6 - 3'-0"
#7 - 3'-11"

RETAINING WALL BILL OF MATERIALS

Bar	No.	Size	Length (ft)	Shape
h21	12	#4	24'-8"	
h22	14	#4	25'-8"	
h25	24	#4	19'-0"	
h26	28	#4	19'-3"	
n21[E]	108	#8	7'-0"	
t21	68	#8	9'-2"	
t22	68	#6	9'-2"	
v21	43	#4	13'-2"	
v22	108	#5	13'-2"	
w21	22	#4	25'-0"	
w22	22	#4	16'-0"	
w23	44	#4	18'-3"	
Reinforcement Bars		lbs	6700	
Reinforcement Bars, Epoxy Coated		lbs	2020	
Concrete Structures		Cu. Yd.	64.1	

(Work Sheets 10, 11 & 12 of 22 together)

RETAINING WALL
ALPINE ROAD OVER KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: 3/4" = 1'-0"

REVISIONS

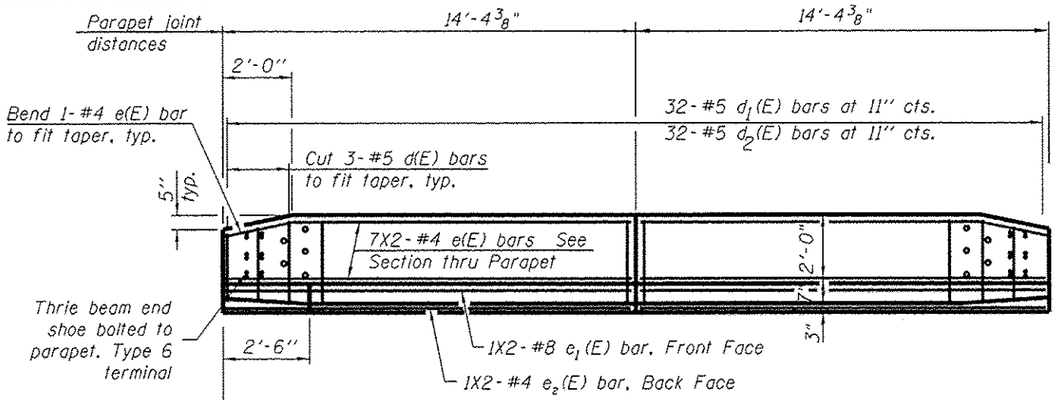
REV. NO.	DESCRIPTION	DATE

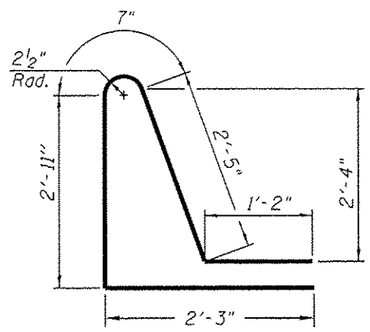
DRAWING:
RETAINING WALL DETAILS

G:\Microstation\14\14-592\C400\Plans\14-592-S-Retaining Wall- 3.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 48 of 82



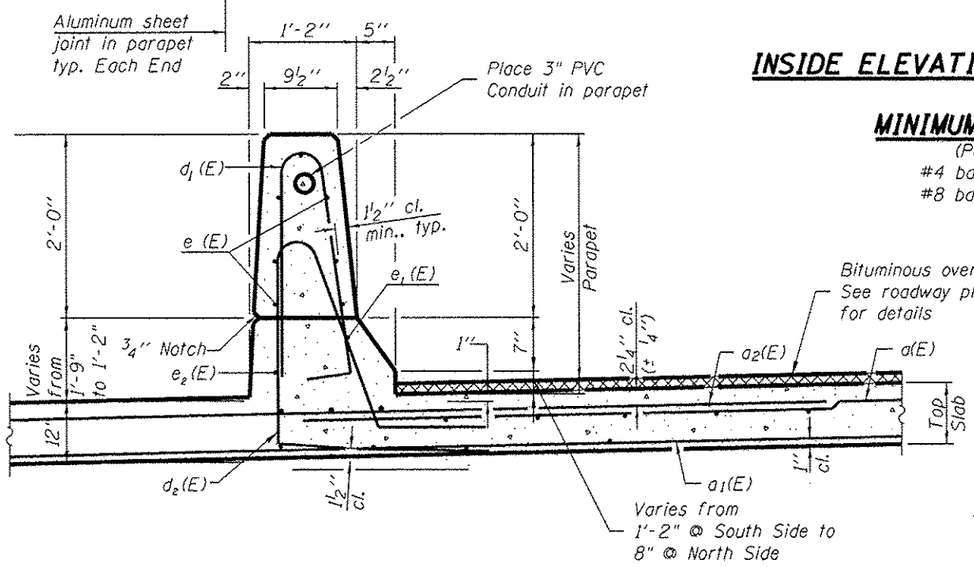


BAR d2(E)

PARAPET & CURB BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_1(E)$	32	#5	5'-7"	
$d_2(E)$	32	#5	9'-4"	
$d_3(E)$	44	#4	5'-0"	
e(E)	14	#4	14'-0"	
$e_1(E)$	2	#8	14'-0"	
$e_2(E)$	2	#4	14'-0"	
$h_{41}(E)$	6	#4	28'-5"	
Reinforcement Bars, Epoxy Coated		Pound	980	
Concrete Superstructure		Cu. Yds.	4.5	

Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.

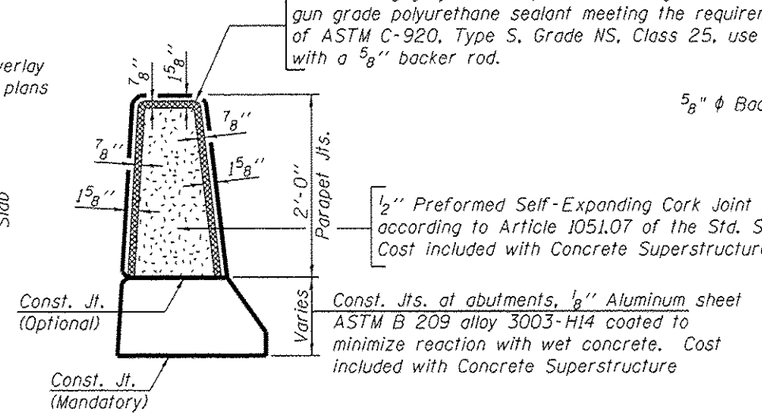


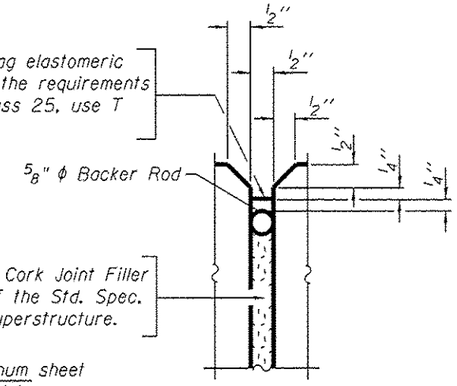
INSIDE ELEVATION OF PARAPET

SECTION THRU PARAPET

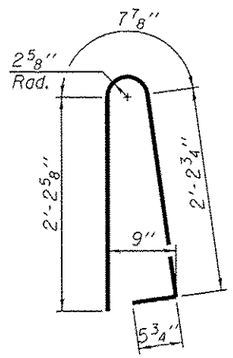
MINIMUM BAR LAP

(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"





PARAPET JOINT DETAILS



BAR d1(E)

(Work Sheets 13, 14 & 15 together)

PARAPET DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD, 425 EAST STATE STREET, ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT, ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK, ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

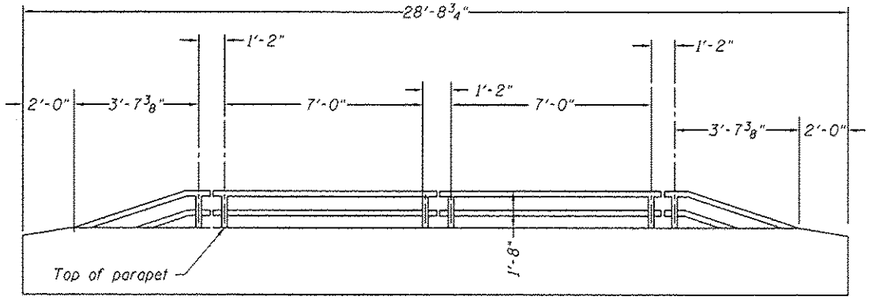
DRAWING: PARAPET DETAILS

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert Parapet.dgn

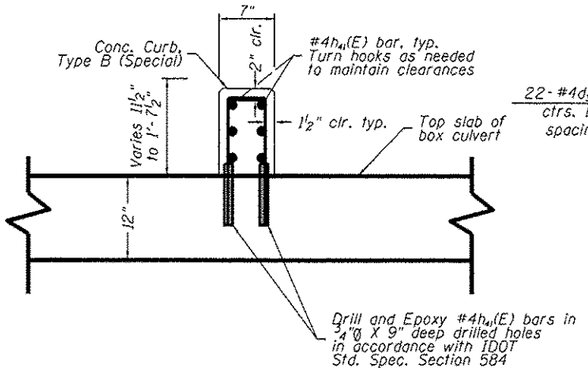
JOB NUMBER: 14-592

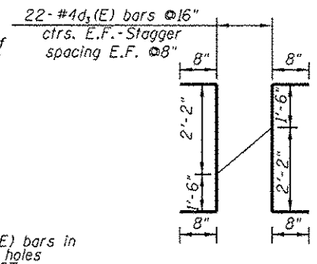
SHEET NUMBER: 49 of 82

PLOT DATE: 3/3/2015

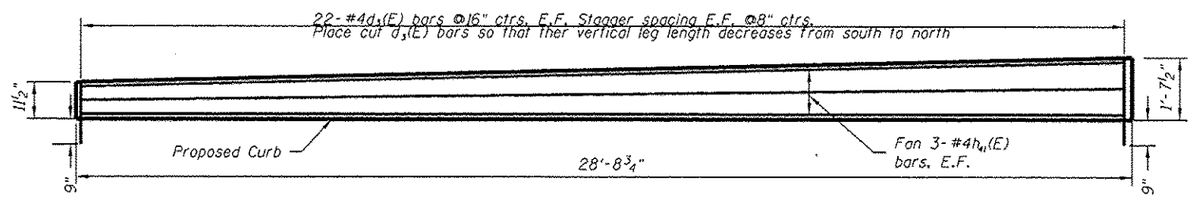


PARAPET RAIL





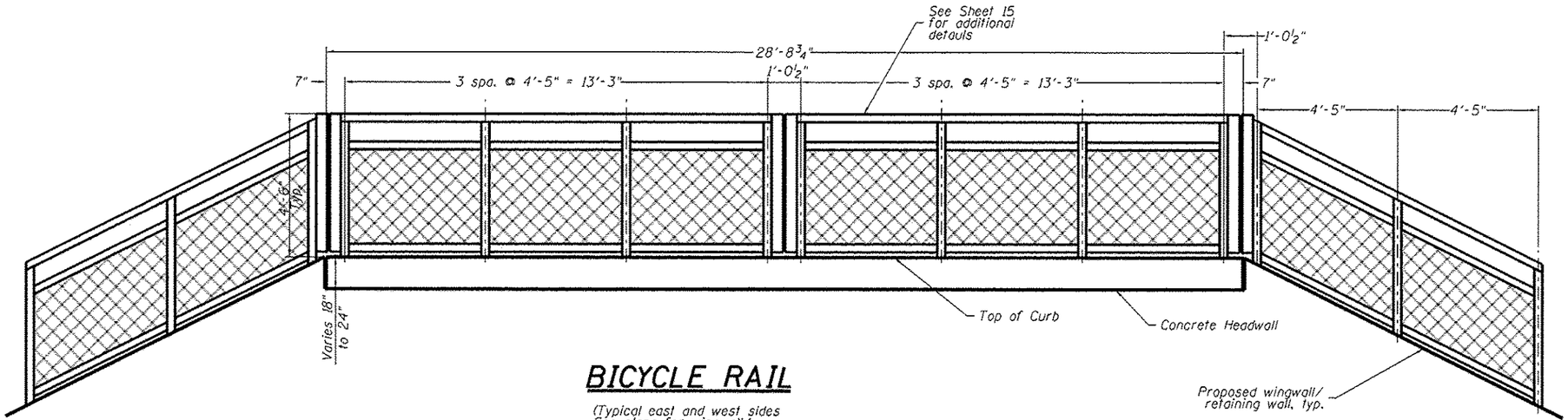
Bar $d_3(E)$



CONCRETE CURB ELEVATION

(Looking east)

CONCRETE CURB, TYPE B (SPECIAL) DETAIL



BICYCLE RAIL

(Typical east and west sides See plans for wingwall/ retaining wall locations & details)

(Work Sheets 13, 14 & 15 together)

BICYCLE AND PARAPET RAIL CONCRETE CURB DETAILS ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK F.A.P. RTE 412 WINNEBAGO COUNTY STA. 10+00 S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING:
BICYCLE AND PARAPET RAIL
CONCRETE CURB DETAILS

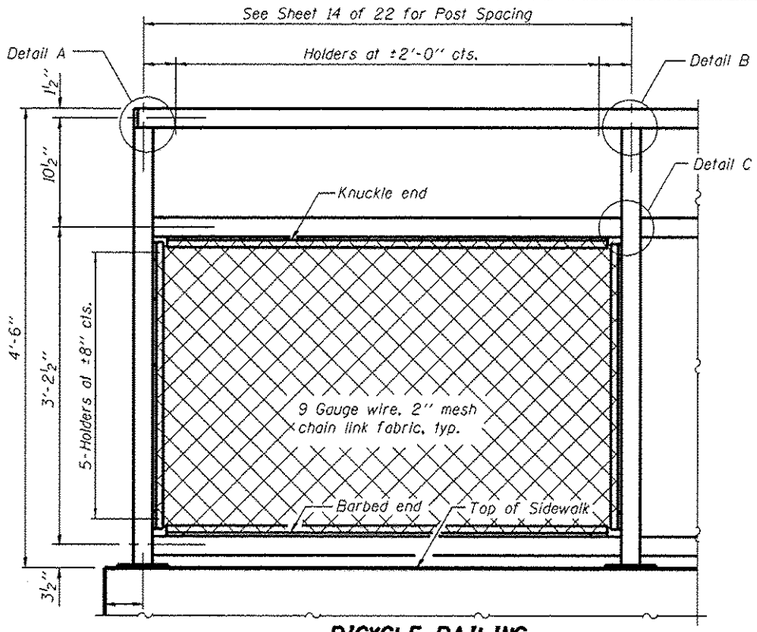
G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert Rolland parapet.dgn

JOB NUMBER: 14-592

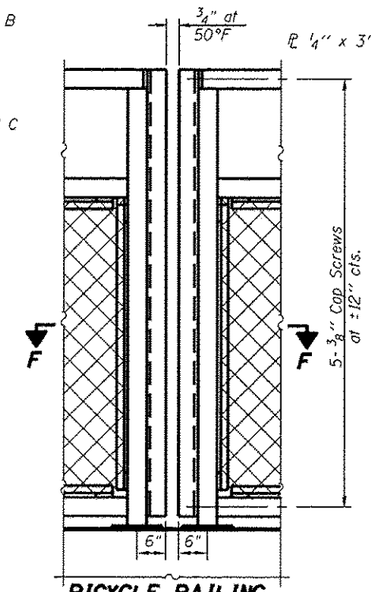
SHEET NUMBER: 50 of 82

PLOT DATE: 3/3/2015

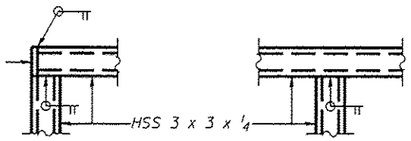
85619



BICYCLE RAILING

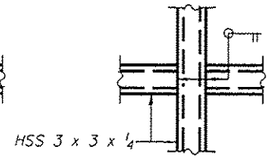


BICYCLE RAILING



DETAIL A

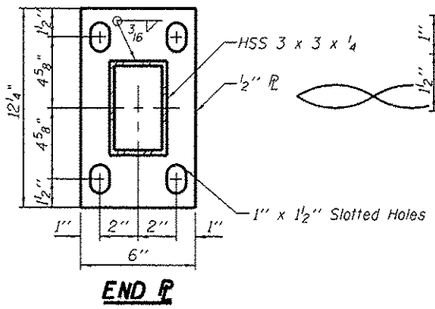
DETAIL B



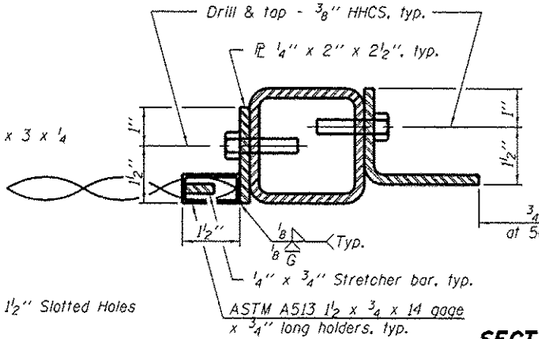
DETAIL C

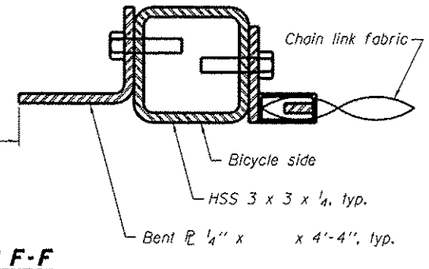
Note:

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

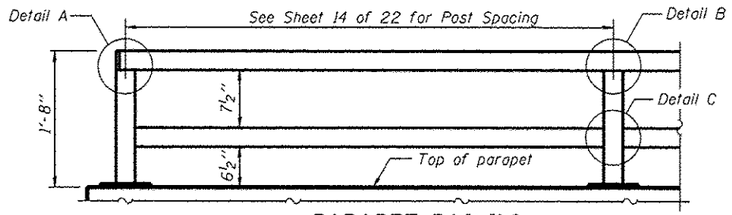


END ℄



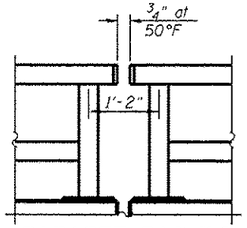


SECTION F-F



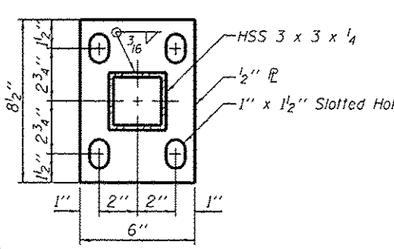
PARAPET RAILING ELEVATION

(Inside Face of Two Element Rail)

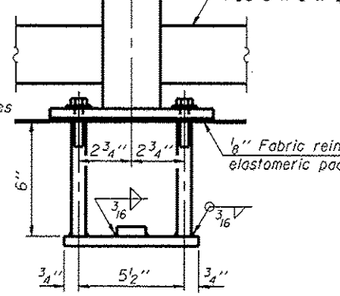


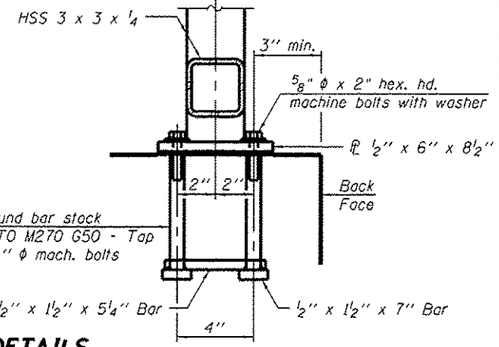
PARAPET RAILING ELEVATION AT EXPANSION JOINT

(Two Element Rail Shown - Three Element Rail Similar)



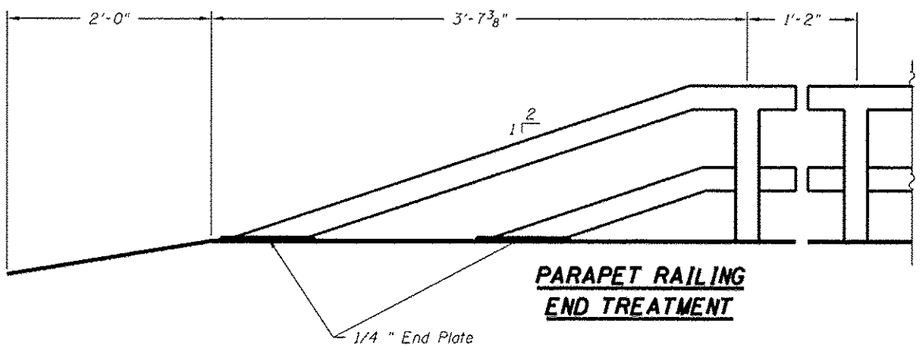
BASE ℄



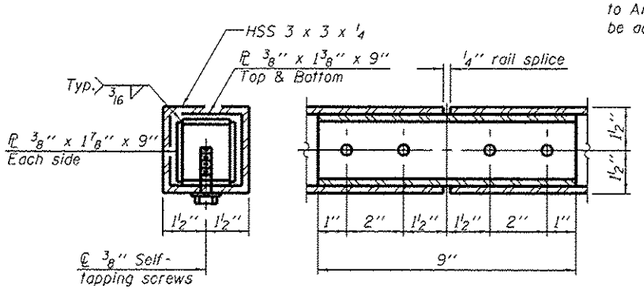


ANCHOR BOLT DETAILS

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting ⅝" ϕ anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



PARAPET RAILING END TREATMENT



RAIL SPLICE

BILL OF MATERIAL

Item	Unit	Quantity
Bicycle Railing	Foot	94
Parapet Railing	Foot	25

(Work Sheets 13, 14 & 15 together)

BICYCLE RAILING
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

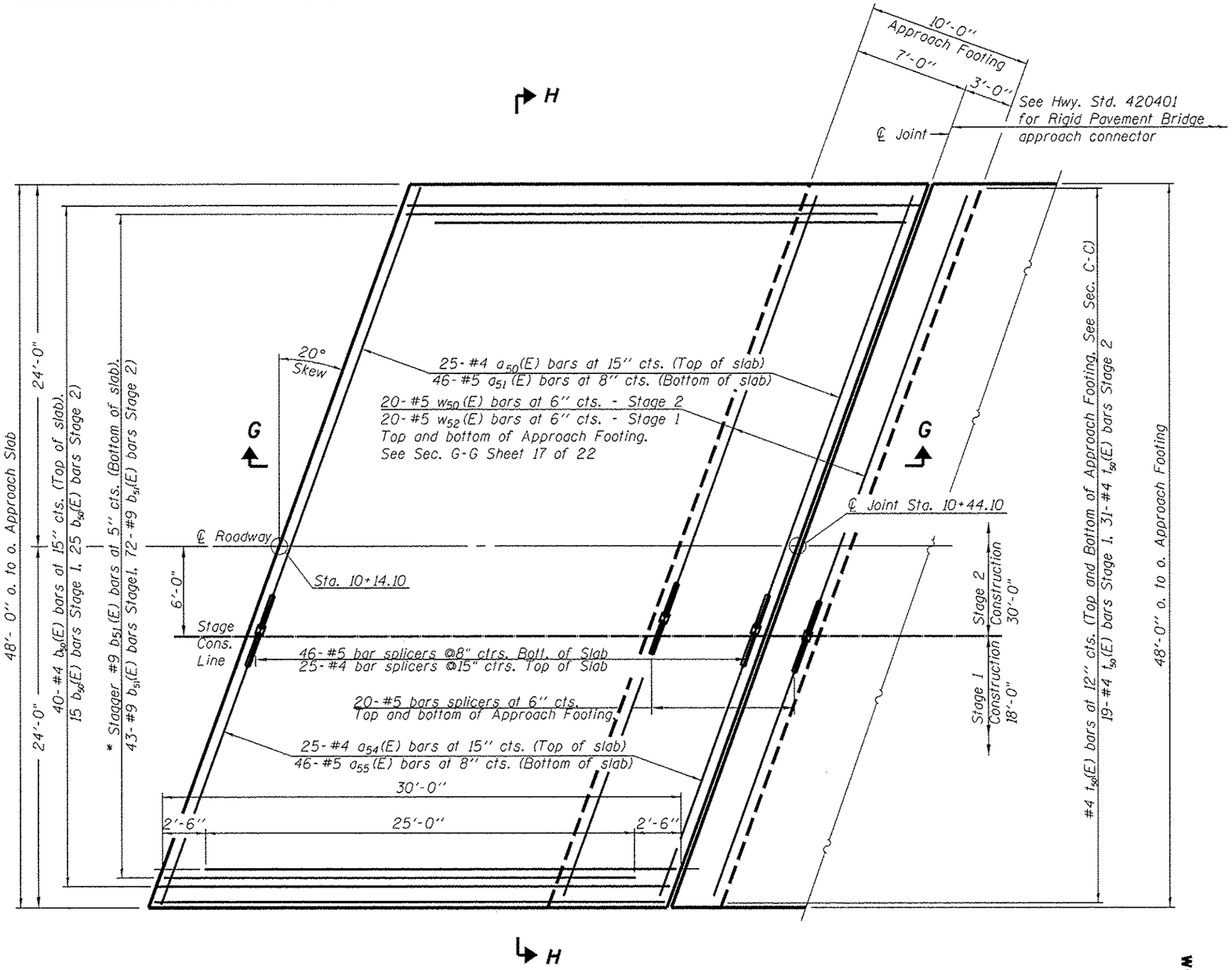
DRAWING:
BICYCLE RAILING

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert Bicycle Railing.dgn

JOB NUMBER:
14-592

SHEET NUMBER:
51 of 82

PLOT DATE: 3/3/2015

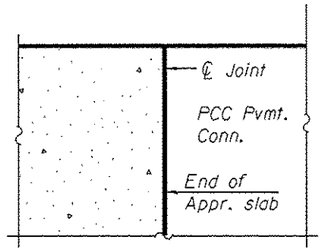


PLAN

* Tilt #9 b_1(E) bars as required to maintain clearance.
** Space between a(E) bars, typ. each parapet.

Notes:
See sheet 17 of 22 for Sections G-G and H-H.
a(E) and a_1(E) bar spacings measured along ℄ Rdwy.

*** Cost included with Concrete Superstructure.



RIGID PAVEMENT

DETAIL A

(Work Sheets 16 and 17 together)

NORTH APPROACH SLAB DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

BA-L 12-12-12

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS IOWA WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD 425 EAST STATE STREET ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

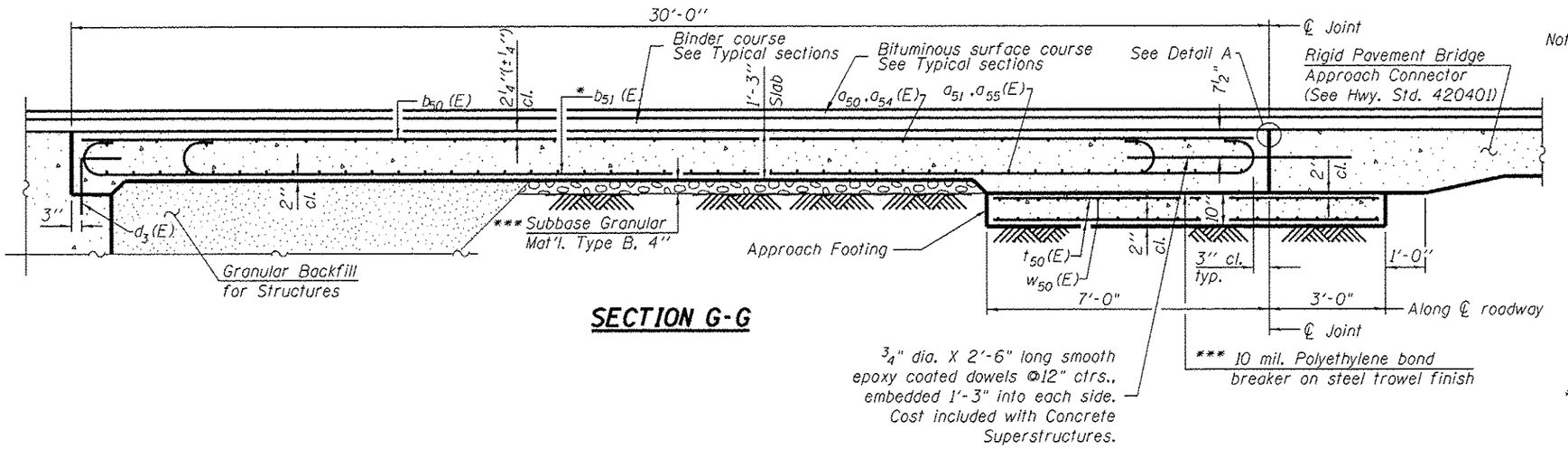
DRAWING: NORTH APPROACH SLAB

G:\Microstation\14\14-592\C400\Plans\14-592-S-Box Culvert Approach Slab.dgn

JOB NUMBER: 14-592
SHEET NUMBER: 52 of 82

PLOT DATE: 3/3/2015

85619



SECTION G-G

Notes:

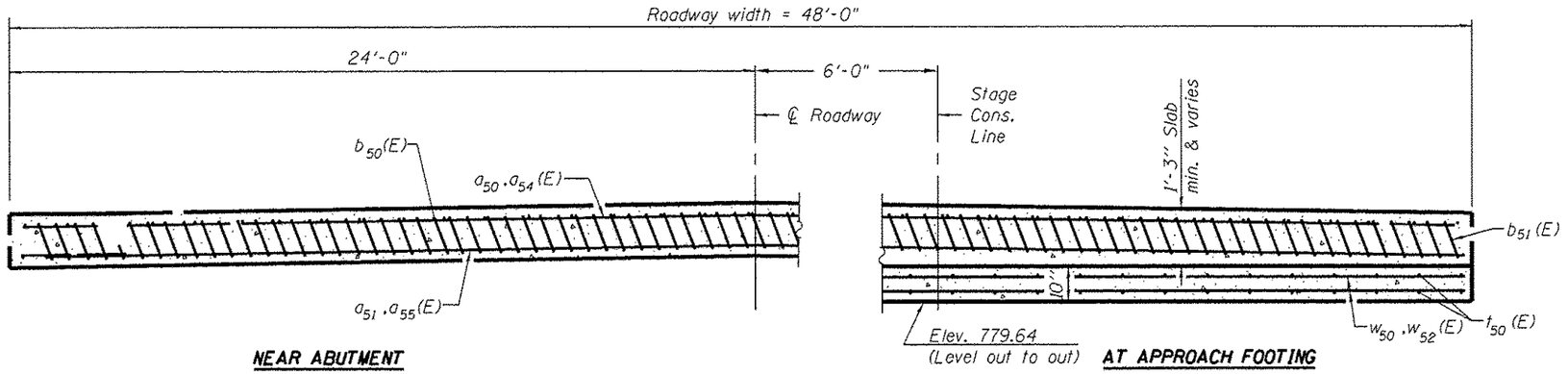
See sheet 16 of 22 for Detail A.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For d_3(E) bar details, see sheet 7 of 22
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 20 of 22.
Cost of excavation for approach footing included with Concrete Structures.
For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 22.
For additional parapet details, see sheets 13 & 14 of 22

* Tilt #9 b_{51} (E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

NORTH APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{50}(E)	25	#4	31'-7"	
a_{51}(E)	46	#5	31'-7"	
a_{54}(E)	25	#4	18'-10"	
a_{55}(E)	46	#5	18'-10"	
b_{50}(E)	40	#4	29'-8"	
b_{51}(E)	115	#9	29'-9"	
t_{50}(E)	100	#4	9'-8"	
w_{50}(E)	40	#5	31'-7"	
w_{52}(E)	40	#5	18'-10"	
Concrete Superstructure			Cu. Yd.	70.8
Concrete Structures			Cu. Yd.	15.8
Reinforcement Bars, Epoxy Coated			Pound	18430

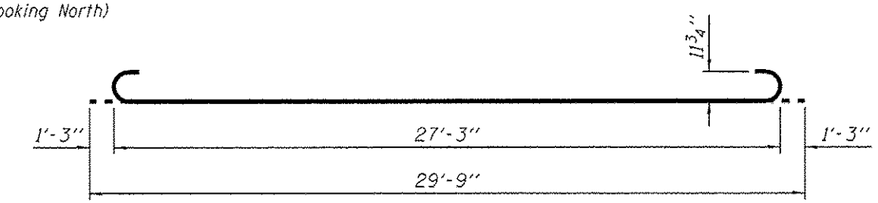


NEAR ABUTMENT

AT APPROACH FOOTING

SECTION H-H

(See Plan for dimensions not shown)
(Looking North)



BAR b_{51}(E)

BA-L 12-12-12

(Work Sheets 16 and 17 together)

NORTH APPROACH SLAB DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD, 425 EAST STATE STREET, ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT, ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK, ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

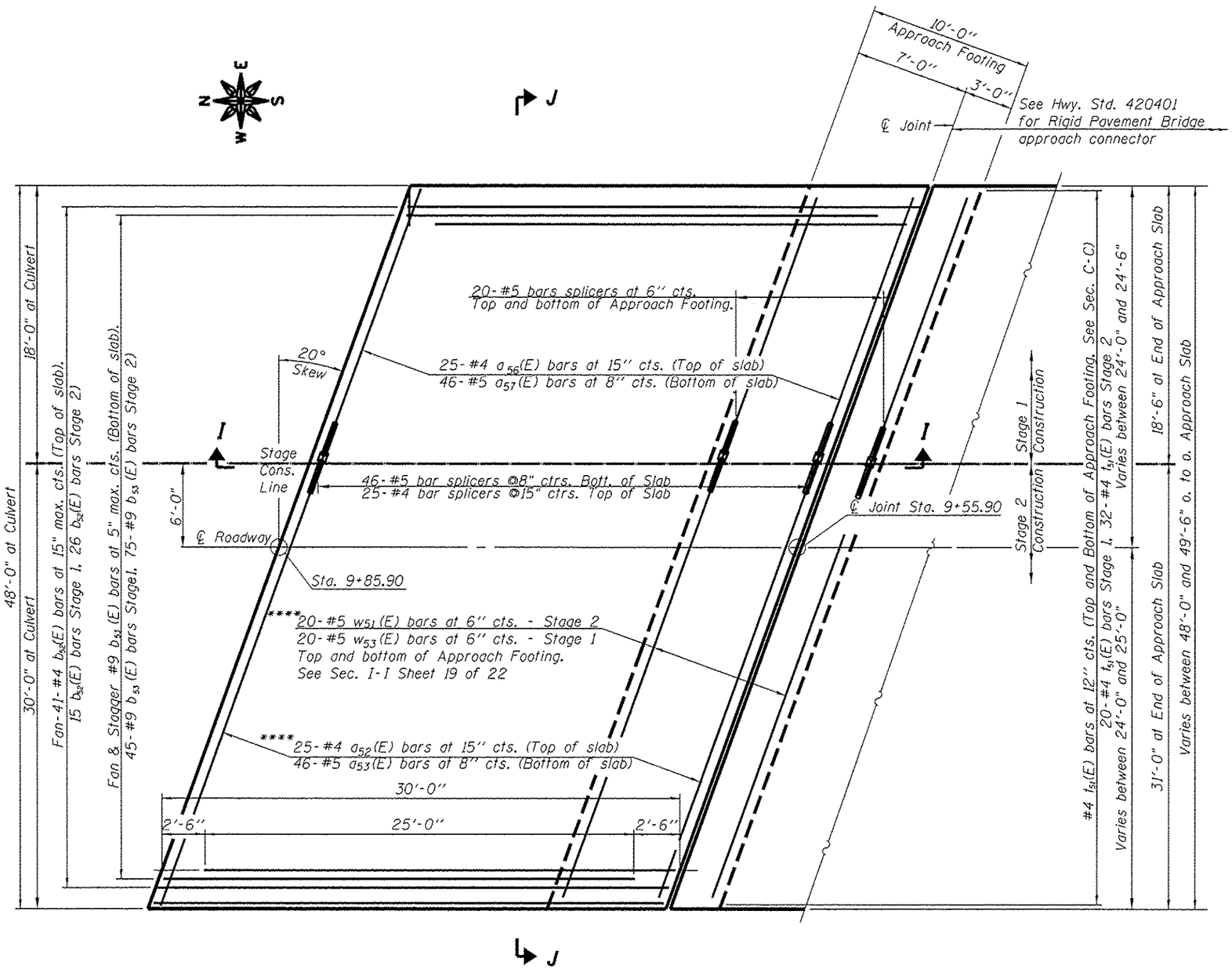
DRAWING: NORTH APPROACH SLAB-2

G:\M\Projects\14\14-592\CADD\Plans\14-592-5-Box Culvert Approach Slab-2.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 53 of 82

PLOT DATE: 3/3/2015

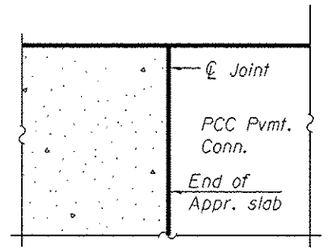


PLAN

Notes:
See sheet 19 of 22 for Sections I-I and J-J.
a(E) and a_1(E) bar spacings measured along ℄ Rdwy.

*** Cost included with Concrete Superstructure.

**** Order bars Full Length.
Cut in field to maintain clearances



RIGID PAVEMENT

DETAIL A

* Tilt #9 b_{53}(E) bars as required to maintain clearance.
** Space between a(E) bars, typ. each parapet.

BA-L 12-12-12

(Work Sheets 18 and 19 together)

SOUTH APPROACH SLAB DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS IOWA WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD 425 EAST STATE STREET ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

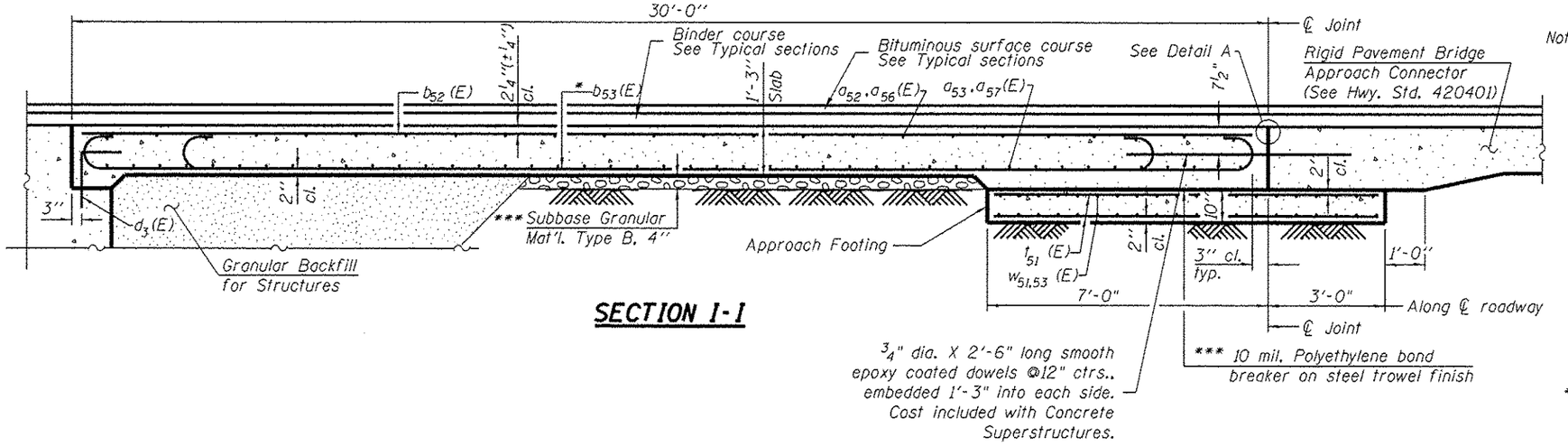
DRAWING: SOUTH APPROACH SLAB

G:\Microstation\14\14-592\CADD\Plans\14-592-5-Box Culvert Approach Slab-3.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 54 of 82

PLOT DATE: 3/3/206



SECTION I-I

Notes:

See sheet 18 of 22 for Detail A.

Approach slab and parapet concrete shall be paid for as Concrete Superstructure.

Approach footing concrete shall be paid for as Concrete Structures.

Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.

For d_3(E) bar details, see sheet 7 of 22

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

For bar splicer details, see sheet 20 of 22.

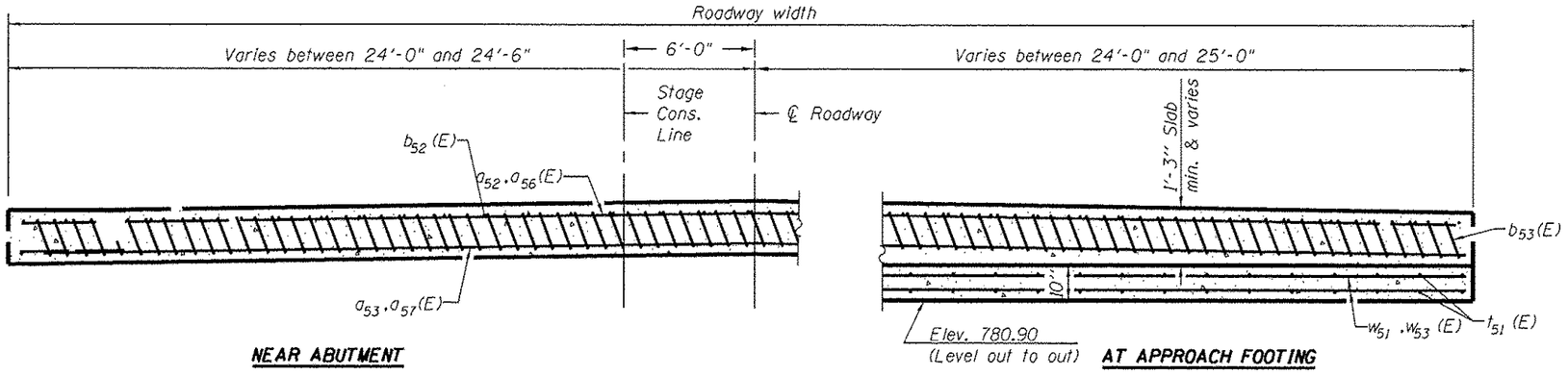
Cost of excavation for approach footing included with Concrete Structures.

For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 22.

For additional parapet details, see sheets 13 & 14 of 22

* Tilt #9 b_{53}(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.



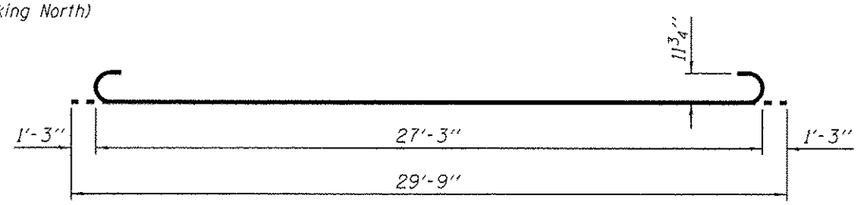
NEAR ABUTMENT

AT APPROACH FOOTING

SECTION J-J

(See Plan for dimensions not shown)

(Looking North)



BAR b_{53}(E)

SOUTH APPROACH BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{52}(E)	25	#4	32'-8"	
a_{53}(E)	46	#5	32'-8"	
a_{56}(E)	25	#4	19'-4"	
a_{57}(E)	46	#5	19'-4"	
b_{52}(E)	41	#4	29'-8"	
b_{53}(E)	120	#9	29'-9"	
t_{51}(E)	104	#4	9'-8"	
w_{51}(E)	40	#5	32'-8"	
w_{53}(E)	40	#5	19'-4"	
Concrete Superstructure			Cu. Yd.	72.3
Concrete Structures			Cu. Yd.	16.3
Reinforcement Bars, Epoxy Coated			Pound	19150

BA-L 12-12-12

(Work Sheets 18 and 19 together)

SOUTH APPROACH SLAB DETAILS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

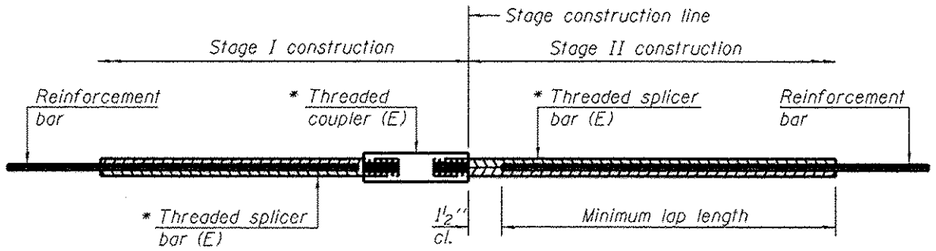
REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING: SOUTH APPROACH SLAB-2

G:\Microstation\14\14-592\C400\Plans\14-592-S-Box Culvert Approach Slab-A.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 55 of 82



STANDARD BAR SPLICER ASSEMBLY

Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

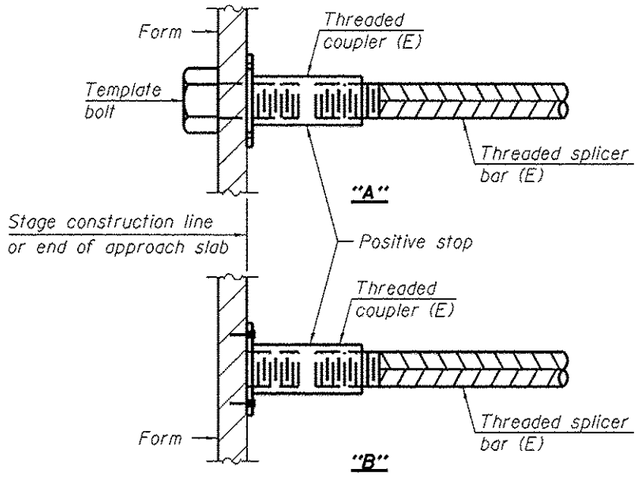
Table 1: Black bar, 0.8 Class C
Table 2: Black bar, Top bar lap, 0.8 Class C
Table 3: Epoxy bar, 0.8 Class C
Table 4: Epoxy bar, Top bar lap, 0.8 Class C
Table 5: Epoxy bar, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

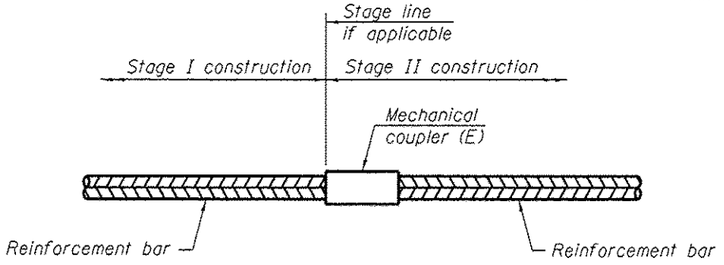
Location	Bar size	No. assemblies required	Table for minimum lap length
S. App. Top of Slab	#4	25	Table 2
S. App. Bot. of Slab	#5	46	Table 2
S. App. Footing	#5	20	Table 2
N. App. Top of Slab	#4	25	Table 2
N. App. Bot. of Slab	#5	46	Table 2
N. App. Footing	#5	20	Table 2
Box Top of Top Slab	#6	17	Table 2
Box Bot. of Top Slab	#6	28	Table 2
Box Top of Bot. Slab	#6	28	Table 2
Box Bot. of Bot. Slab	#6	28	Table 2

BSD-1 8-31-12



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
All reinforcement shall be lapped and tied to the splicer bars.
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BAR SPLICER ASSEMBLY
ALPINE ROAD OVER SOUTH
BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS

REV. NO.	DESCRIPTION	DATE

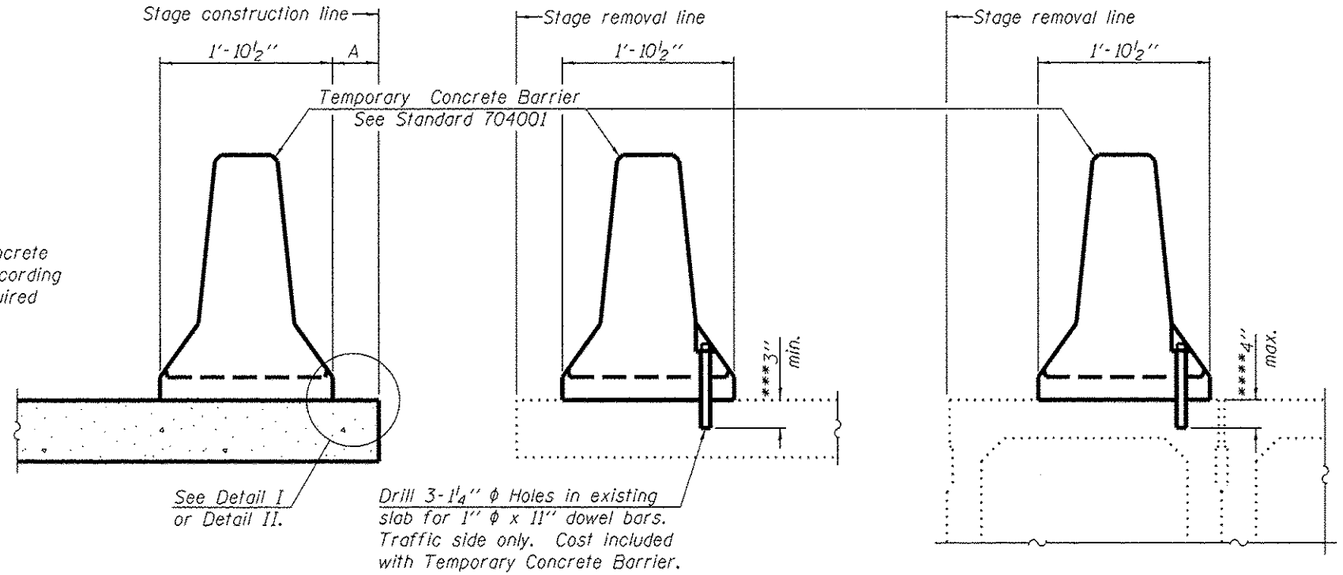
DRAWING:
BAR SPLICER ASSEMBLY

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert Bar Splicer.dgn

JOB NUMBER: 14-592
SHEET NUMBER: 56 of 82

PLOT DATE: 3/3/2015

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

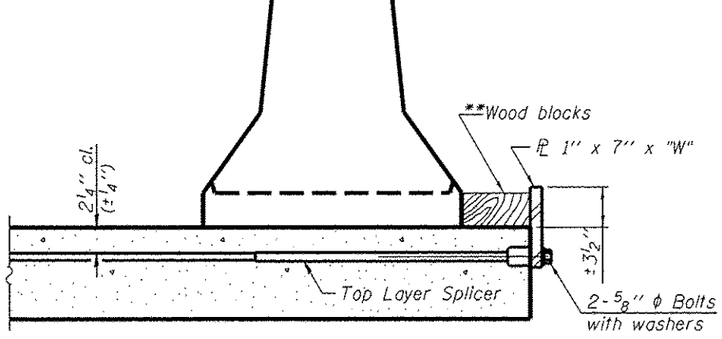


NEW SLAB

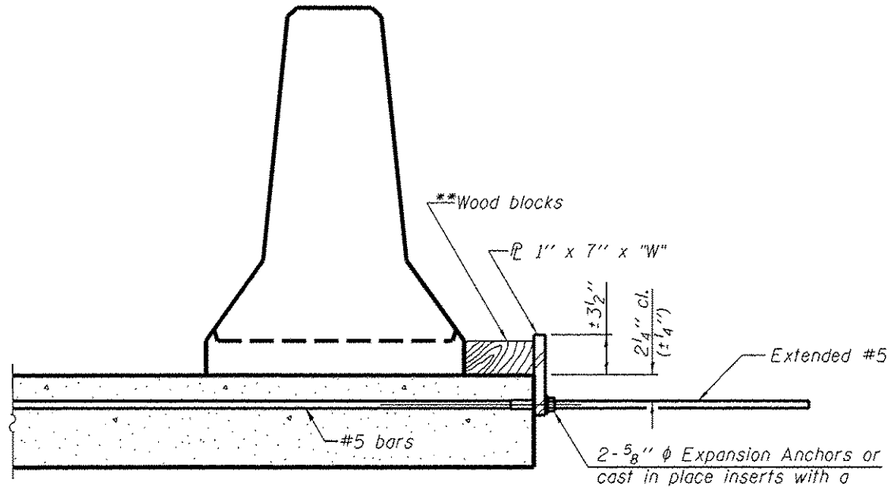
EXISTING SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM



DETAIL I



DETAIL II

R-27 7-1-10

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.
"W" = Top bars spacing + 4"

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

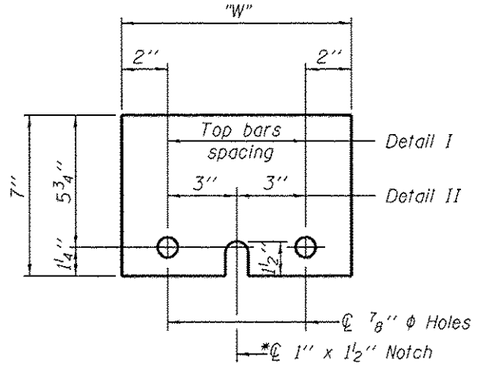
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel ℄ to the concrete slab or concrete wearing surface with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



STEEL RETAINER ℄ 1" x 7" x "W"

* Required only with Detail II

TEMPORARY BARRIER
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS IOWA WISCONSIN

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING: TEMPORARY BARRIER DETAIL

G:\Microstation\14-592\CADD\Plans\14-592-S-Box Culvert Temp Barrier.dgn

JOB NUMBER: 14-592

SHEET NUMBER: 57 of 82

PLOT DATE: 3/3/2015

PROJECT South Alpine Road Box Culvert, South Alpine Road, Rockford, Illinois
CLIENT Fehr Graham, Champaign, Illinois
BORING 1 DATE STARTED 7-30-14 DATE COMPLETED 7-30-14 JOB L-81,952

ELEVATIONS
GROUND SURFACE 782.5
END OF BORING 783.0

WATER LEVEL OBSERVATIONS
▼ WHILE DRILLING 8.0 '
▽ AT END OF BORING 7.0 '
▼ 24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.7	781.8	8.0" Hot-Mix Asphalt Surface and Binder Courses (1.75"S, 2.75"S, 1.5"S and 2"B)
									16" Crushed Stone Base Course
1	SS		10	6.1			2.0	780.5	
2	SS		6	24.7	1.0*	94			Stiff dark brown silty CLAY, trace fine sand, very moist (CL) (A-7-6)
							6.5	777.0	
3	SS		4	21.3	0.5S 0.5*	101			▽ Soft dark brown sandy CLAY, trace gravel, very moist (CL) (A-6)
							8.0	774.5	▼
4	SS		13	10.1					Firm brown and light brown silty SAND, some gravel, dolomite fragments, trace clay, very moist to wet (SM) (A-1-b)
							11.0	771.5	
5	SS		64	10.3					
6	SS		50/3"						Very dense light yellowish-brown silty, sandy DOLOMITE, wet (probable weathered rock)
7	SS		100/0"						
8	SS		100/0"						
9	SS		100/0"						

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Auger refusal at 19.5 feet.

Note:
S = Approximate Hot Mix Surface course thickness, inches.
B = Approximate Hot Mix Binder course thickness, inches.

End of Boring at 19.5'

DRILL RIG NO. 334

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DISTANCE BELOW SURFACE IN FEET

TSC_603 81952.GPJ TSC_ALL.GDT 8/11/14

PROJECT South Alpine Road Box Culvert, South Alpine Road, Rockford, Illinois
CLIENT Fehr Graham, Champaign, Illinois
BORING 2 DATE STARTED 7-30-14 DATE COMPLETED 7-30-14 JOB L-81,952

ELEVATIONS
GROUND SURFACE 784.0
END OF BORING 785.0

WATER LEVEL OBSERVATIONS
▼ WHILE DRILLING 8.0 '
▽ AT END OF BORING 8.0 '
▼ 24 HOURS

SAMPLE NO.	SAMPLE TYPE	LENGTH RECOVERY	N	WC	Qu	γ_{DRY}	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.8	783.2	9.0" Hot Mix Asphalt Surface and Binder Courses (1.5"S, 2"S, 2"S, and 3.5"B)
									15" Crushed Stone Base Course
1	SS	100/3"		9.8			2.0	782.0	
2	SS		9	27.7	0.5*	89			FILL - Dark brown silty CLAY, little sand, trace crushed stone, very moist (CL) (A-6)
							5.5	778.5	
3	SS		6	23.8	0.75*	96			Stiff dark brown silty CLAY, trace fine sand, very moist (CL) (A-7-6)
							8.0	776.0	▼
4	SS		9	22.7	0.25*	101			Loose light brown, brown and gray clayey SAND, little dolomite fragments with sandy clay seam, very moist to wet (SC/CL) (A-2-4/A-6)
							11.0	773.0	
5	SS		19	11.7					
6	SS	79/10"		11.7					Firm to dense light yellowish-brown to light brown silty, sandy DOLOMITE, trace clay, wet (probable weathered rock)
7	SS	100/5"		14.8					
8	SS	100/0"							
9	SS	100/0"							

* Approximate unconfined compressive strength based on measurements with a calibrated pocket penetrometer.

Auger refusal at 19.0 feet.

Note:
S = Approximate Hot Mix Surface course thickness, inches.
B = Approximate Hot Mix Binder course thickness, inches.

End of Boring at 19.0'

DRILL RIG NO. 334

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

DISTANCE BELOW SURFACE IN FEET

TSC_603 81952.GPJ TSC_ALL.GDT 8/11/14

BORING LOGS
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
F.A.P. RTE 412
WINNEBAGO COUNTY
STA. 10+00
S.N. 101-6159

FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525
ILLINOIS
IOWA
WISCONSIN

OWNER/DEVELOPER: CITY OF ROCKFORD, 425 EAST STATE STREET, ROCKFORD, IL 61104

PROJECT AND LOCATION: BOX CULVERT REPLACEMENT, ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK, ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: KEB
DATE: 3/3/2015
SCALE: NTS

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING: BORING LOGS

G:\Microstation\14\14-592\CADD\Plans\14-592-S-Box Culvert Borings.dgn

JOB NUMBER: 14-592
SHEET NUMBER: 58 of 82

PLOT DATE: 3/3/2015

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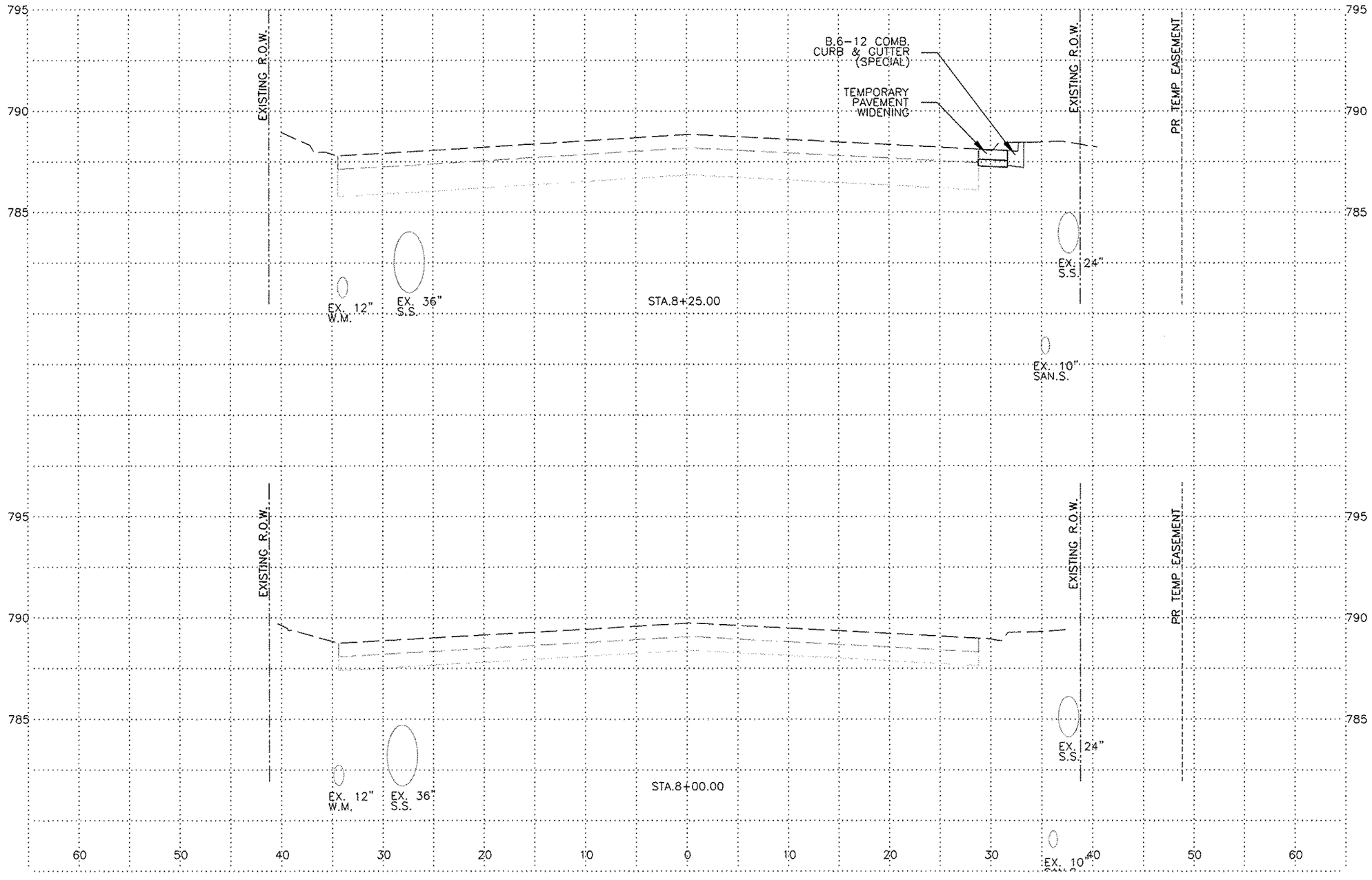

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ENGINEERING & ENVIRONMENTAL
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ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CMO
DATE: 3/3/2015
SCALE: HOR:1"=5'
VER:1"=2'-6"

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
TEMPORARY PAVEMENT WIDENING
CROSS SECTION SHEET

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JOB NUMBER: 14-592

SHEET NUMBER: 59 of 82

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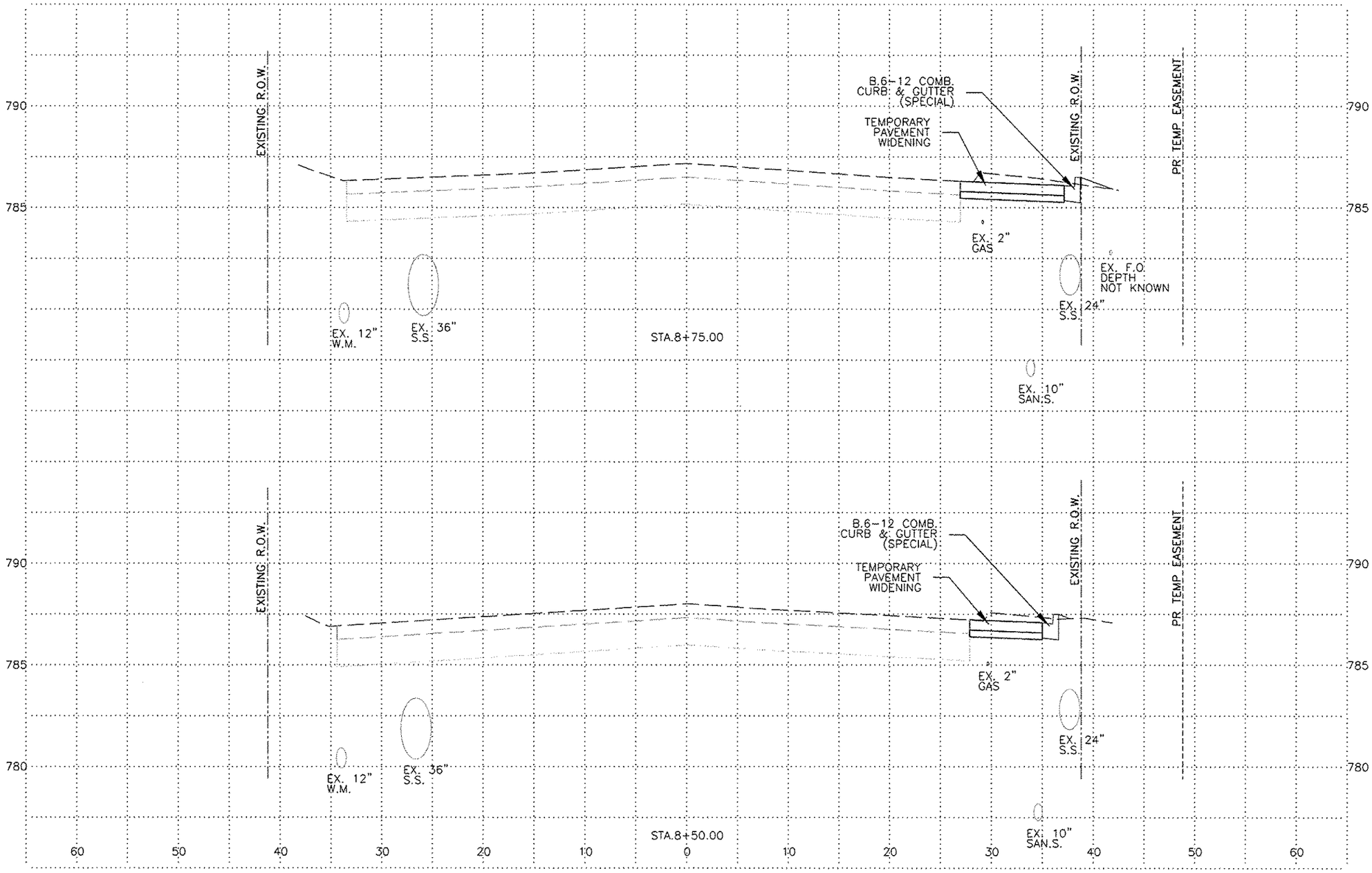

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SHEET NUMBER: 60 of 82

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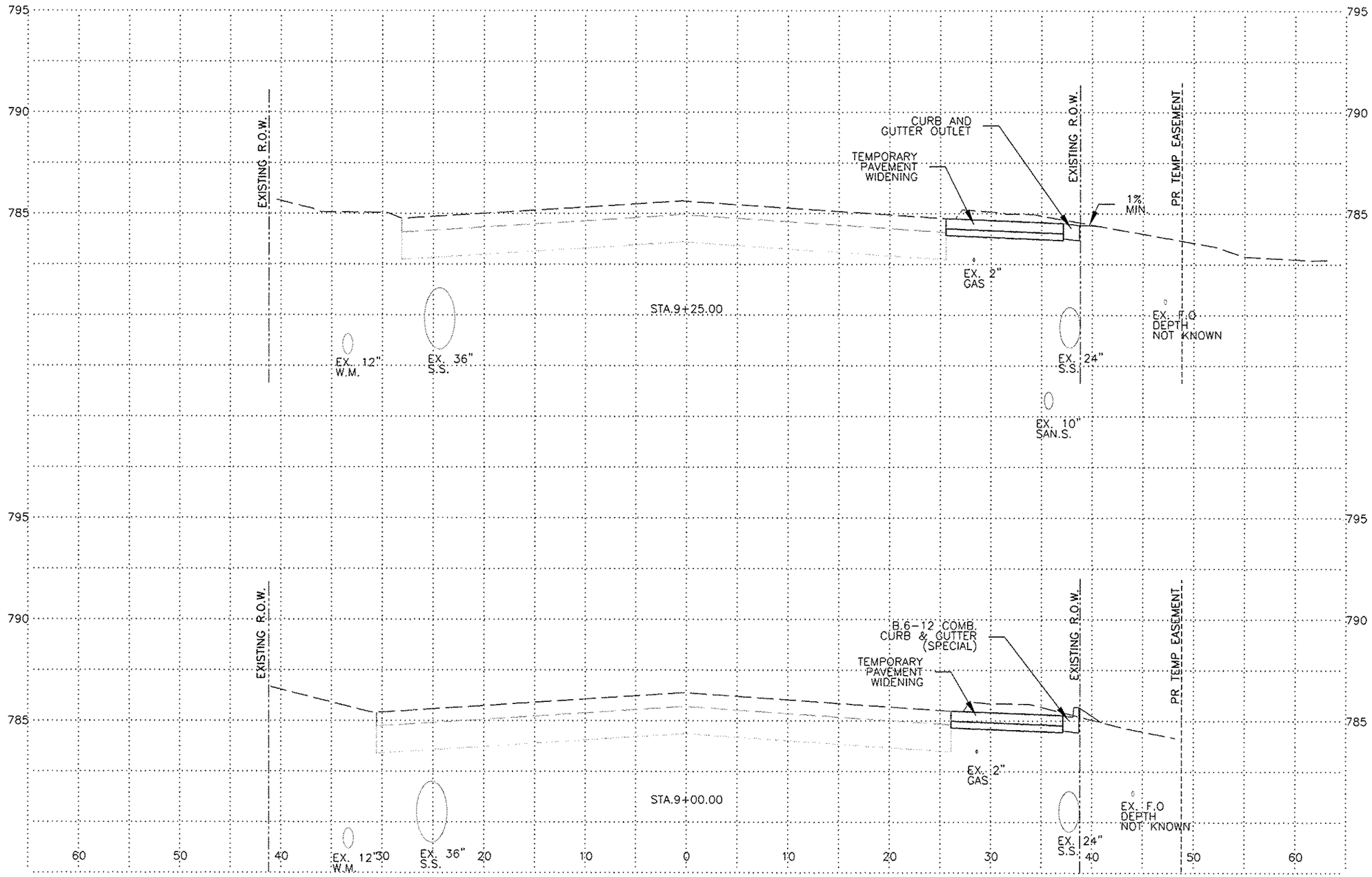

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ILLINOIS
IOWA
WISCONSIN

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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CMO
DATE: 3/3/2015
SCALE: HOR:1"=5'
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REVISIONS

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TEMPORARY PAVEMENT WIDENING
CROSS SECTION SHEET

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JOB NUMBER:
14-592

SHEET NUMBER:
61 of 82

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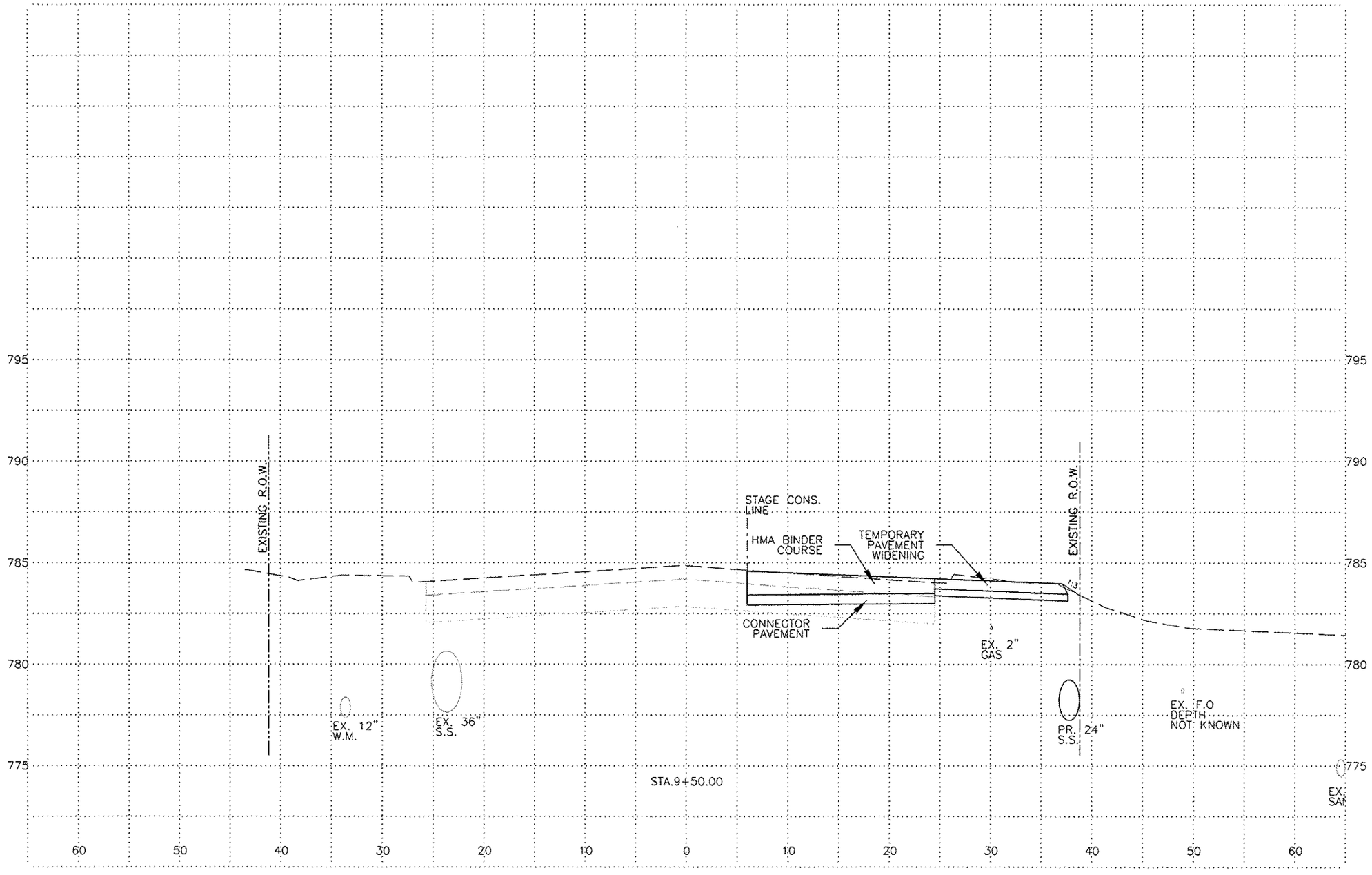

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ILLINOIS
IOWA
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425 EAST STATE STREET
ROCKFORD, IL 61104

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ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

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JOB NUMBER: 14-592

SHEET NUMBER: 62 of 82

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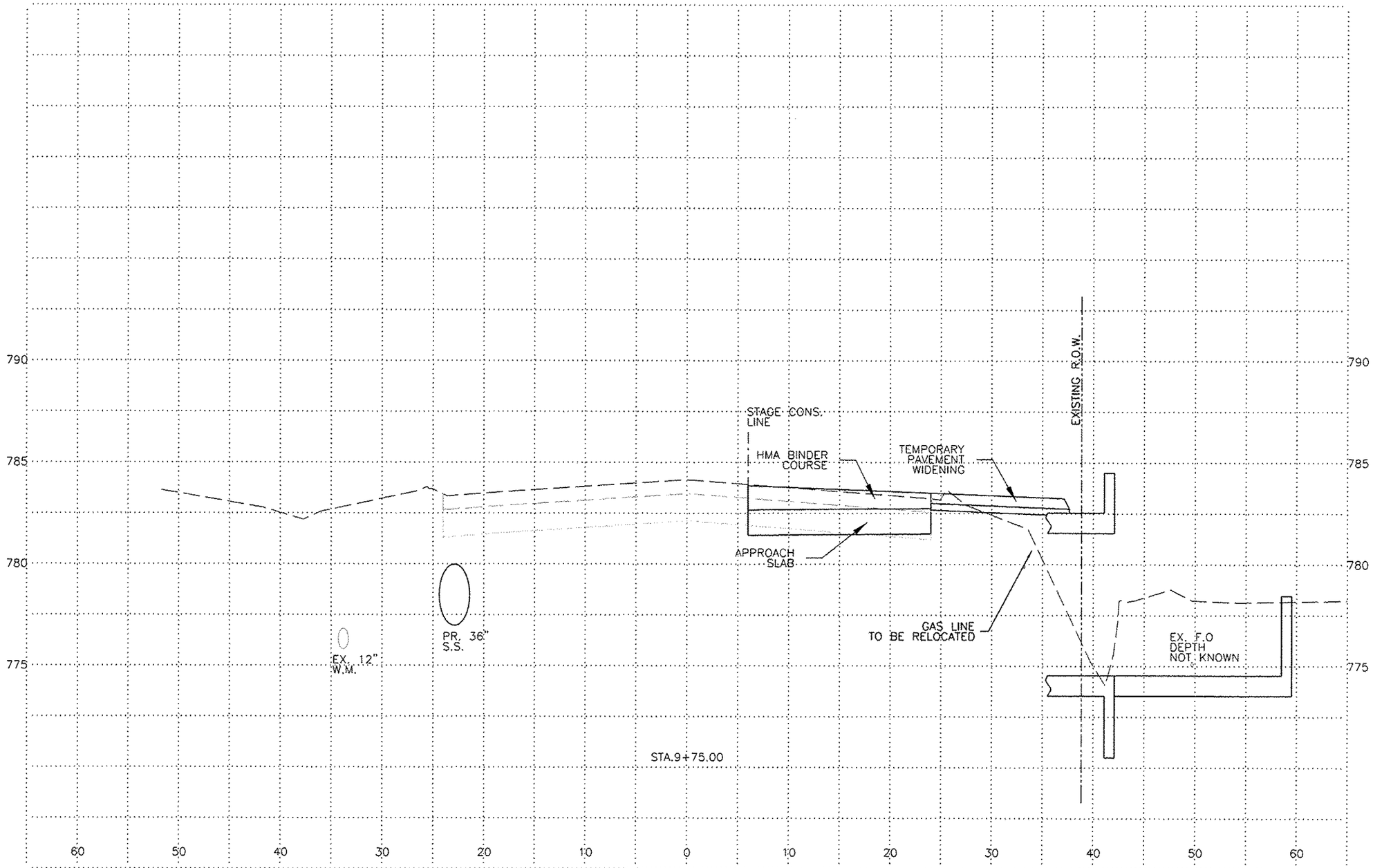

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ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

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425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH OF KEITH CREEK
ROCKFORD, IL 61108

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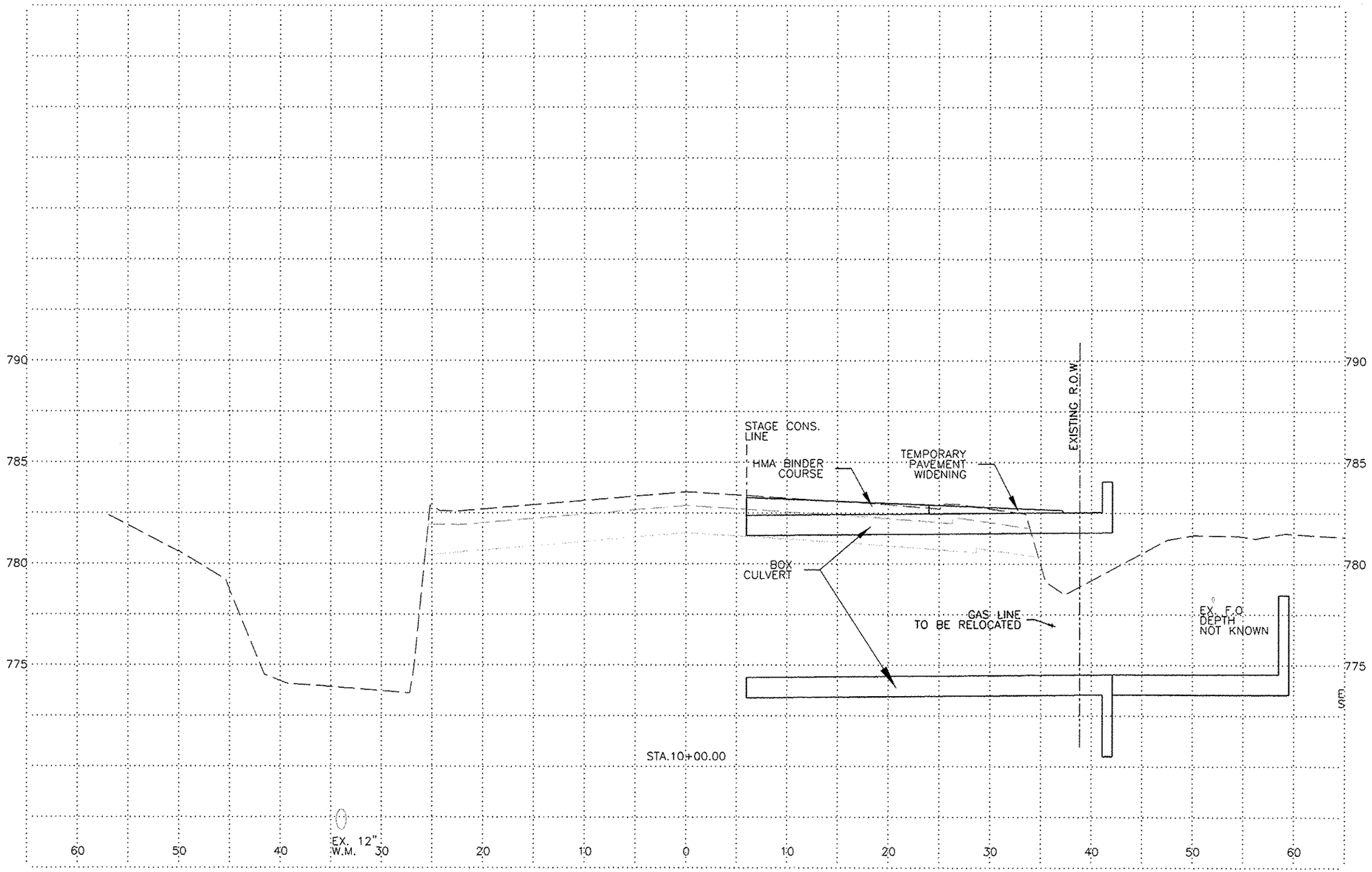

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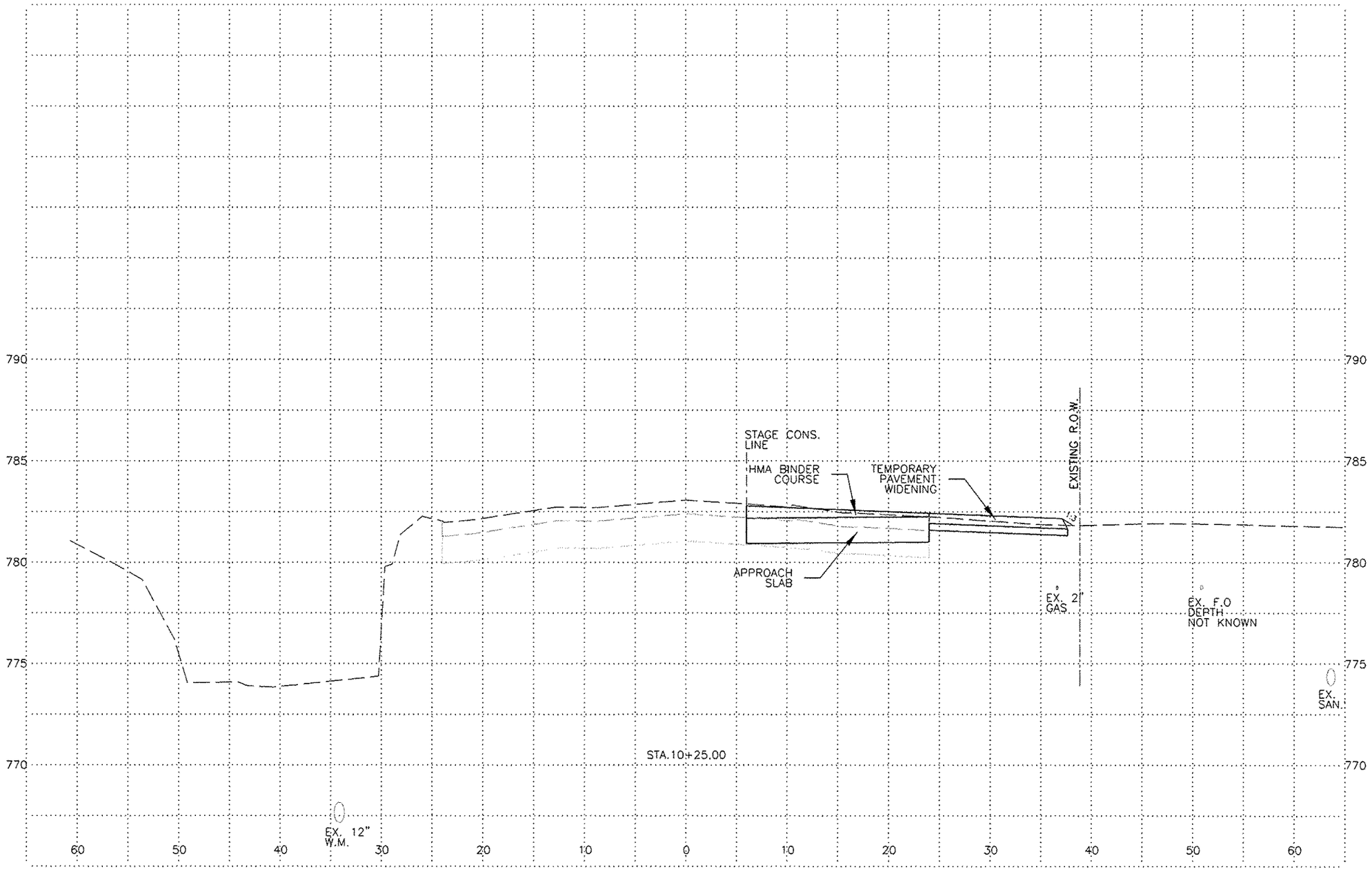

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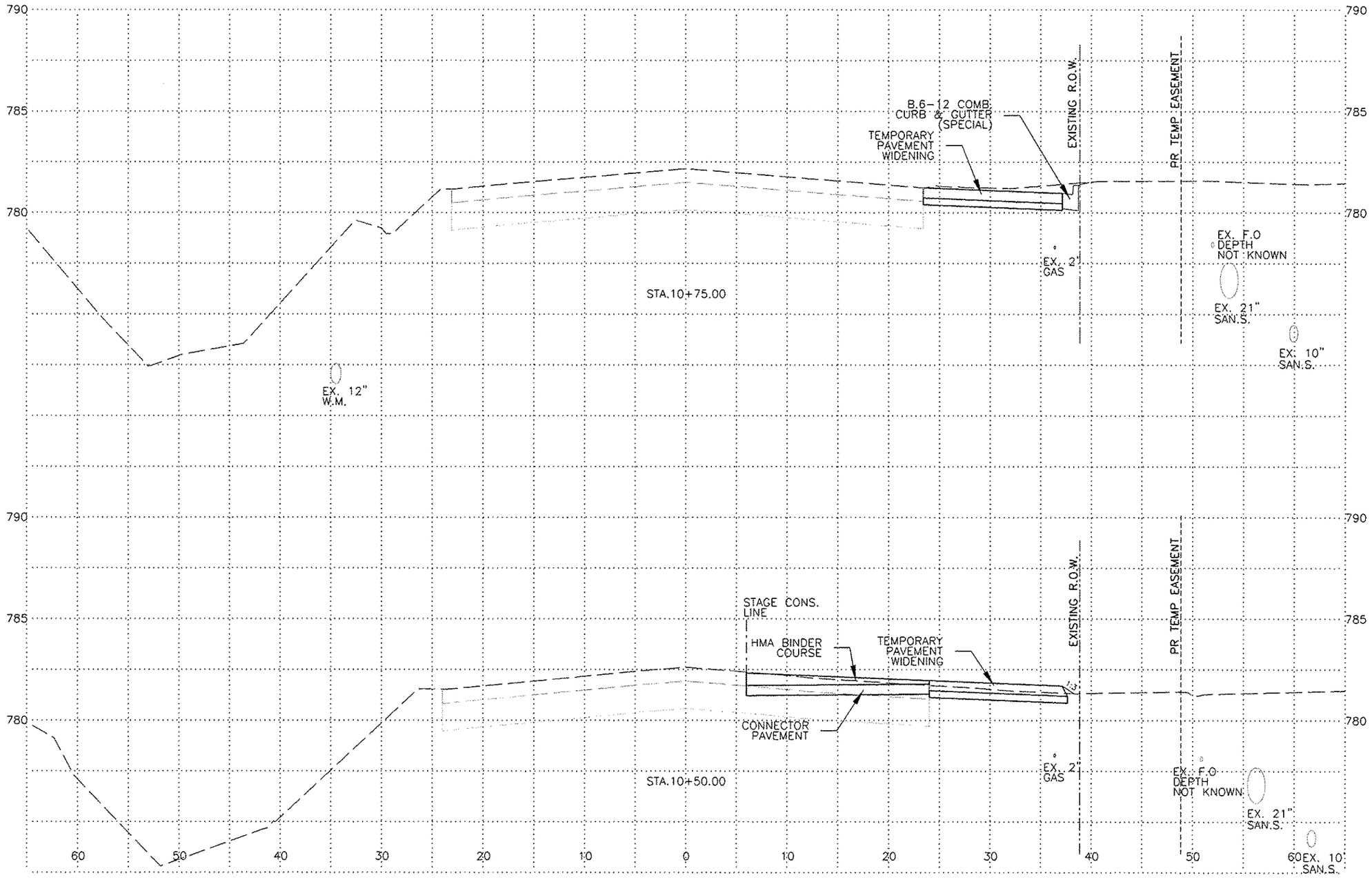

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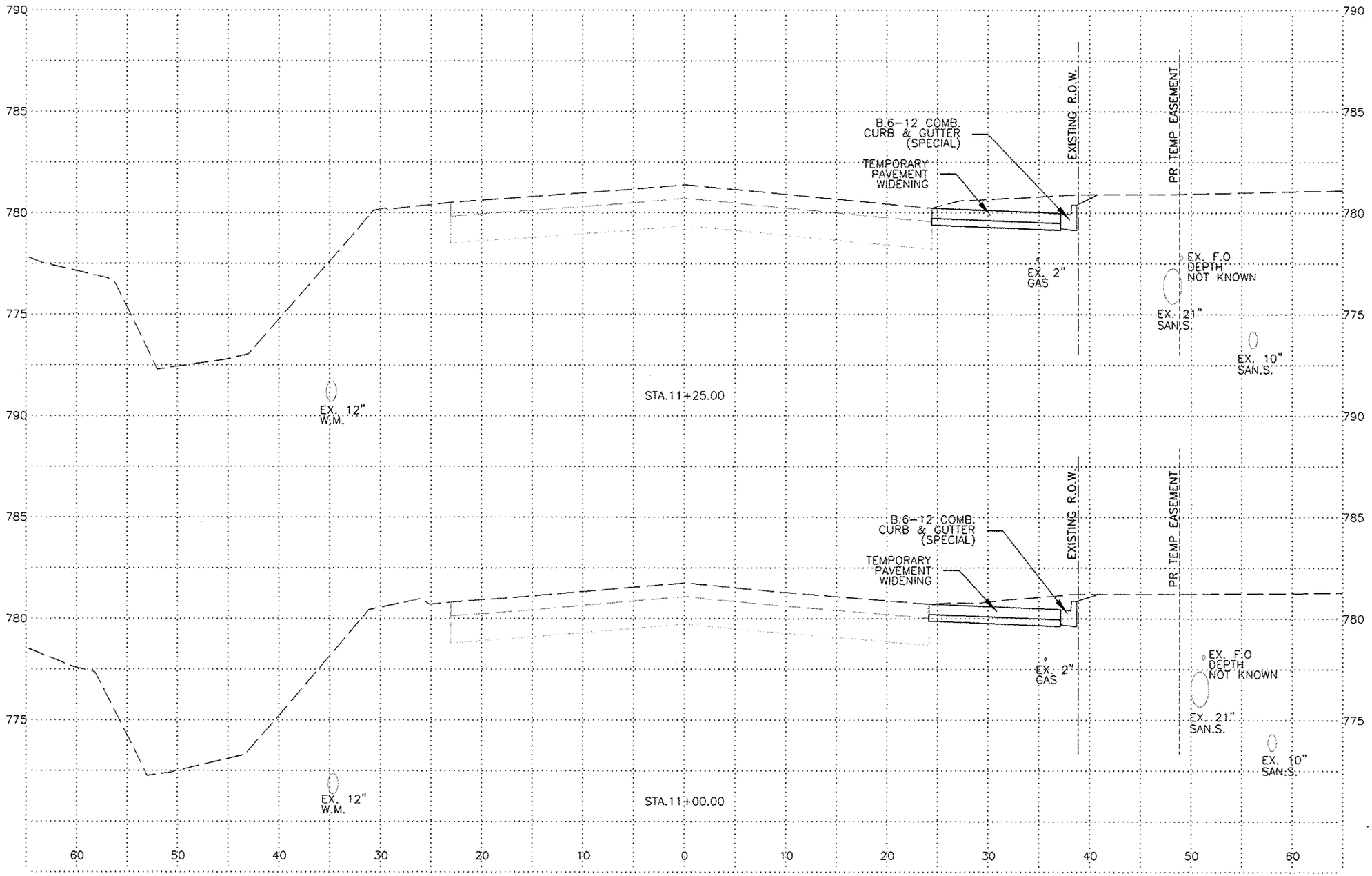

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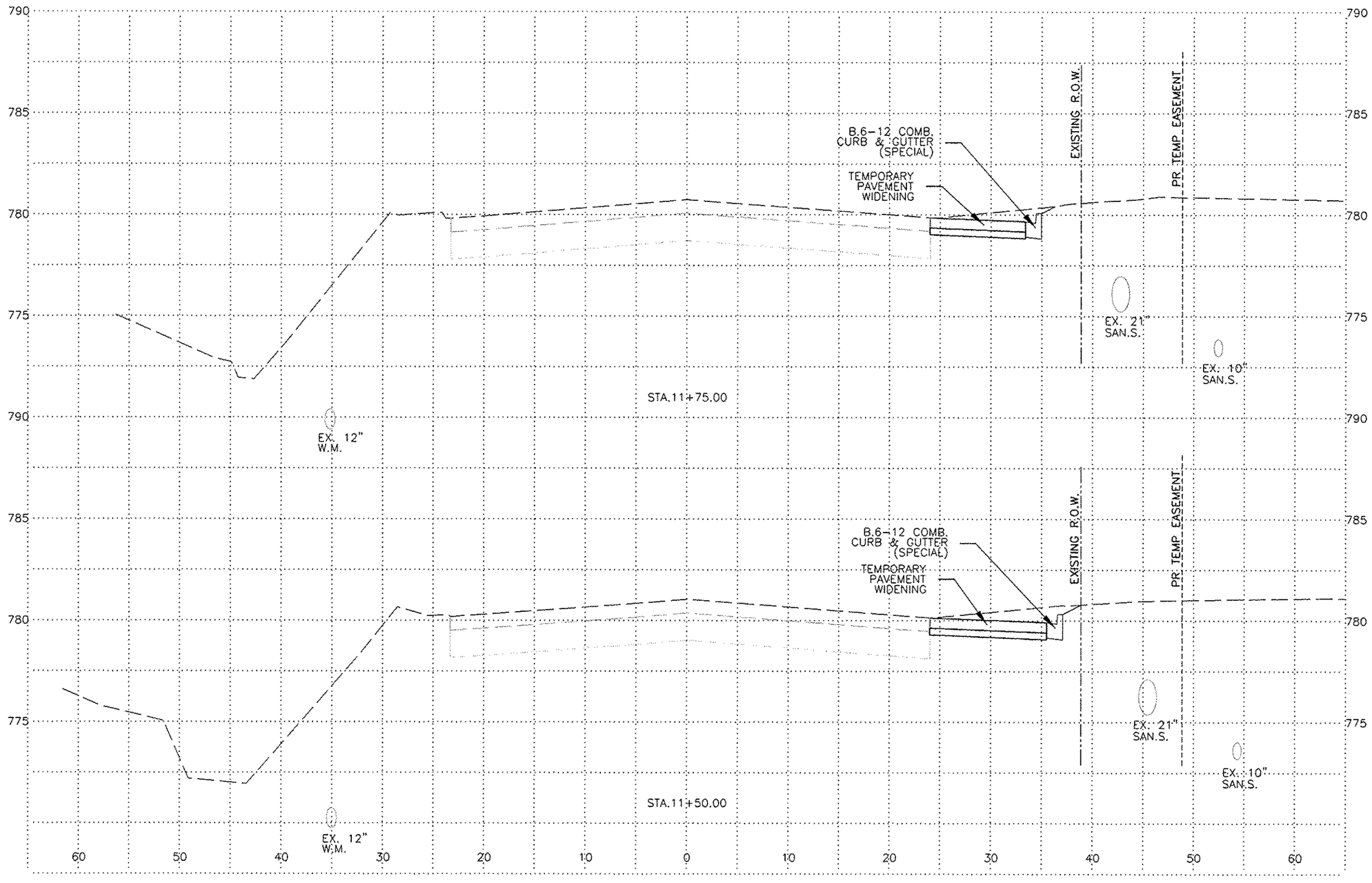

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TEMPORARY PAVEMENT WIDENING
CROSS SECTION SHEET

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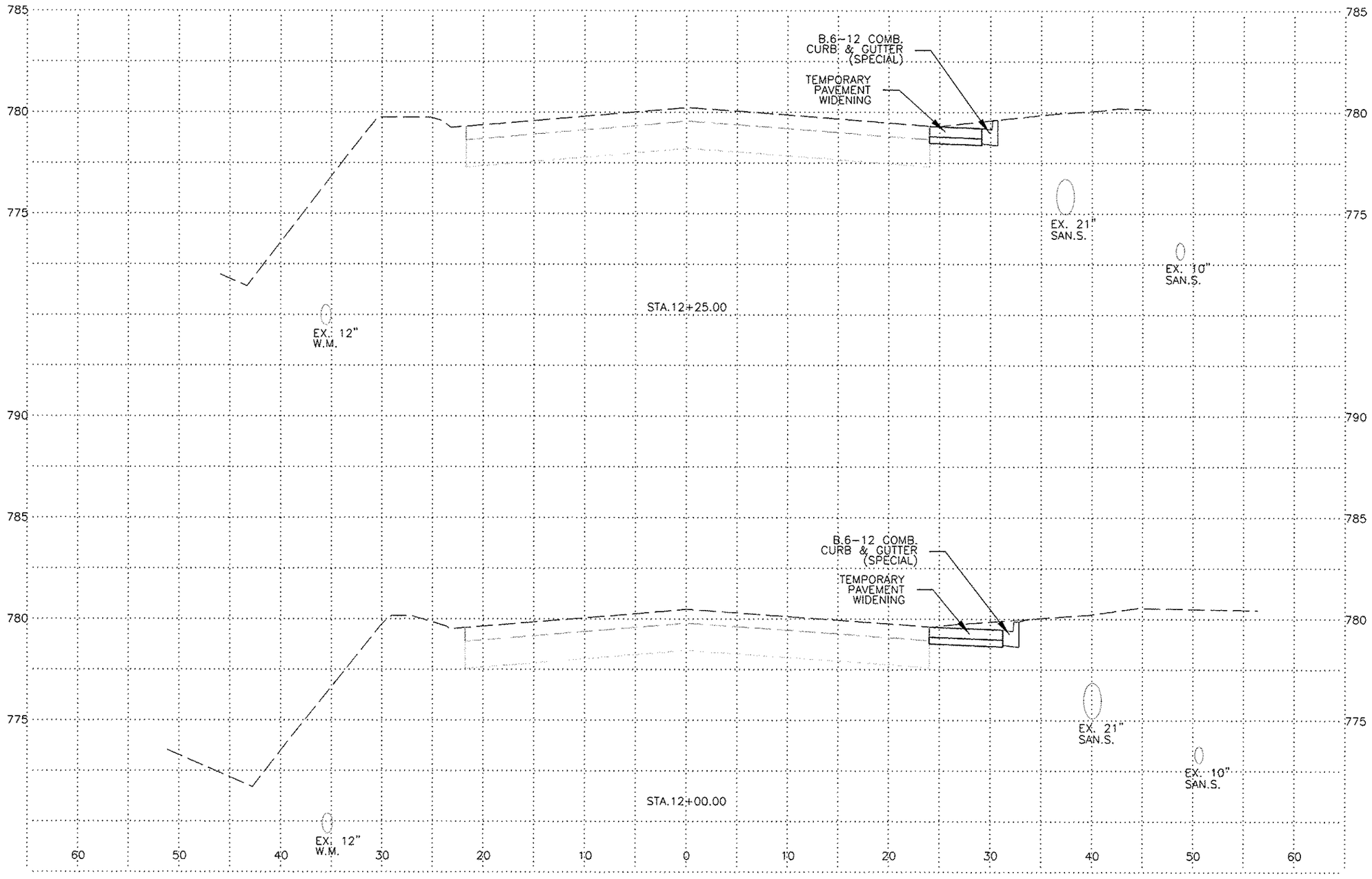
JOB NUMBER: 14-592

SHEET NUMBER: 68 of 82

PLOT DATE: 3/3/2015

85619



FEHR GRAHAM
ENGINEERING & ENVIRONMENTAL
ILLINOIS DESIGN FIRM NO. 184-003525

ILLINOIS
IOWA
WISCONSIN

PLOT DATE: 3/3/2015

OWNER/DEVELOPER:
CITY OF ROCKFORD
425 EAST STATE STREET
ROCKFORD, IL 61104

PROJECT AND LOCATION:
BOX CULVERT REPLACEMENT
ALPINE ROAD OVER SOUTH BRANCH
OF KEITH CREEK
ROCKFORD, IL 61108

DRAWN BY: GM
APPROVED BY: CMO
DATE: 3/3/2015
SCALE: HOR:1"=5'
VER:1"=2'-6"

REVISIONS

REV. NO.	DESCRIPTION	DATE

DRAWING:
TEMPORARY PAVEMENT WIDENING
CROSS SECTION SHEET

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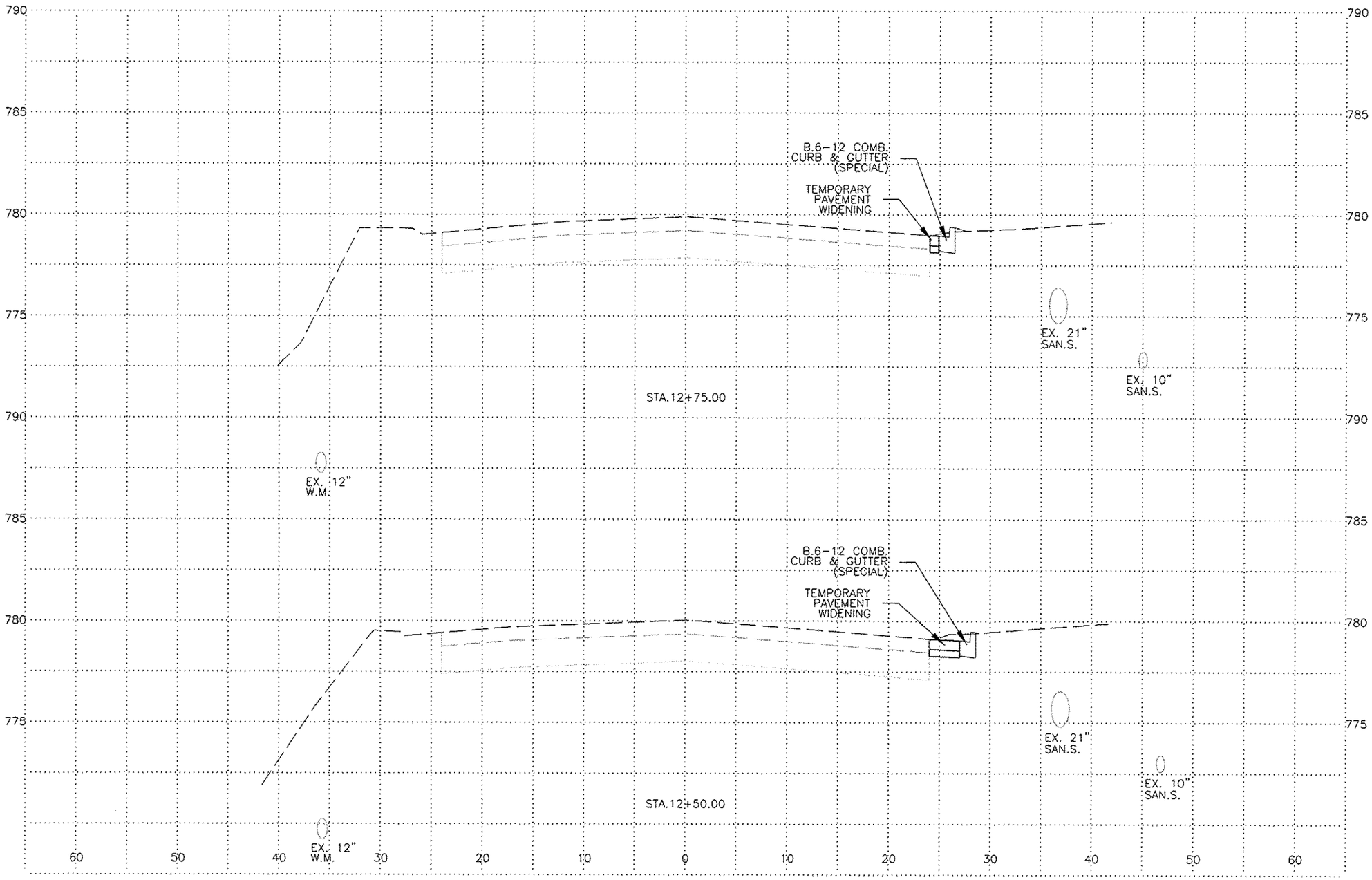
JOB NUMBER:
14-592

SHEET NUMBER:
69 of 82

85619



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JOB NUMBER:
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SHEET NUMBER:
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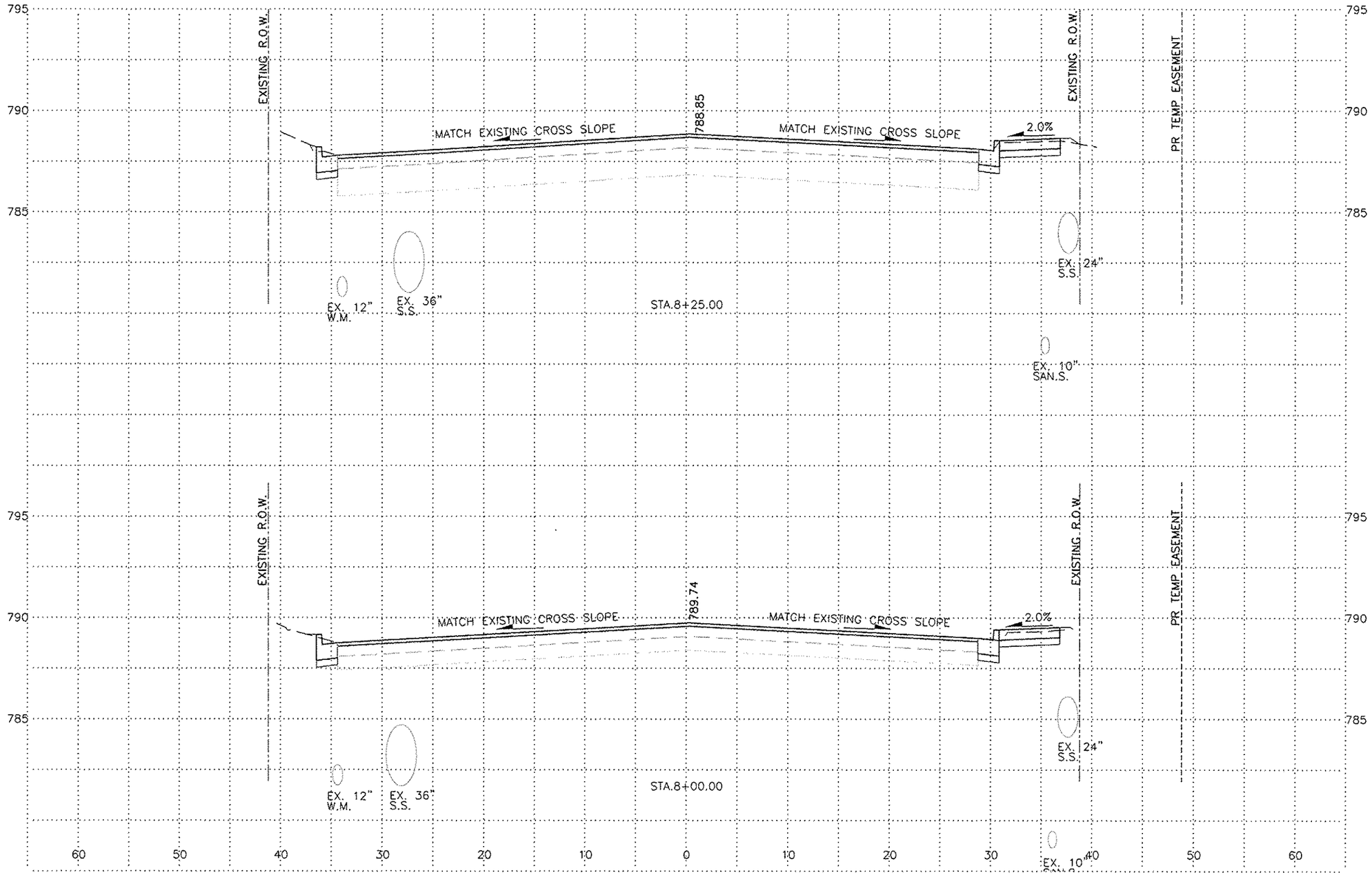
85619



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JOB NUMBER: 14-592

SHEET NUMBER: 71 of 82

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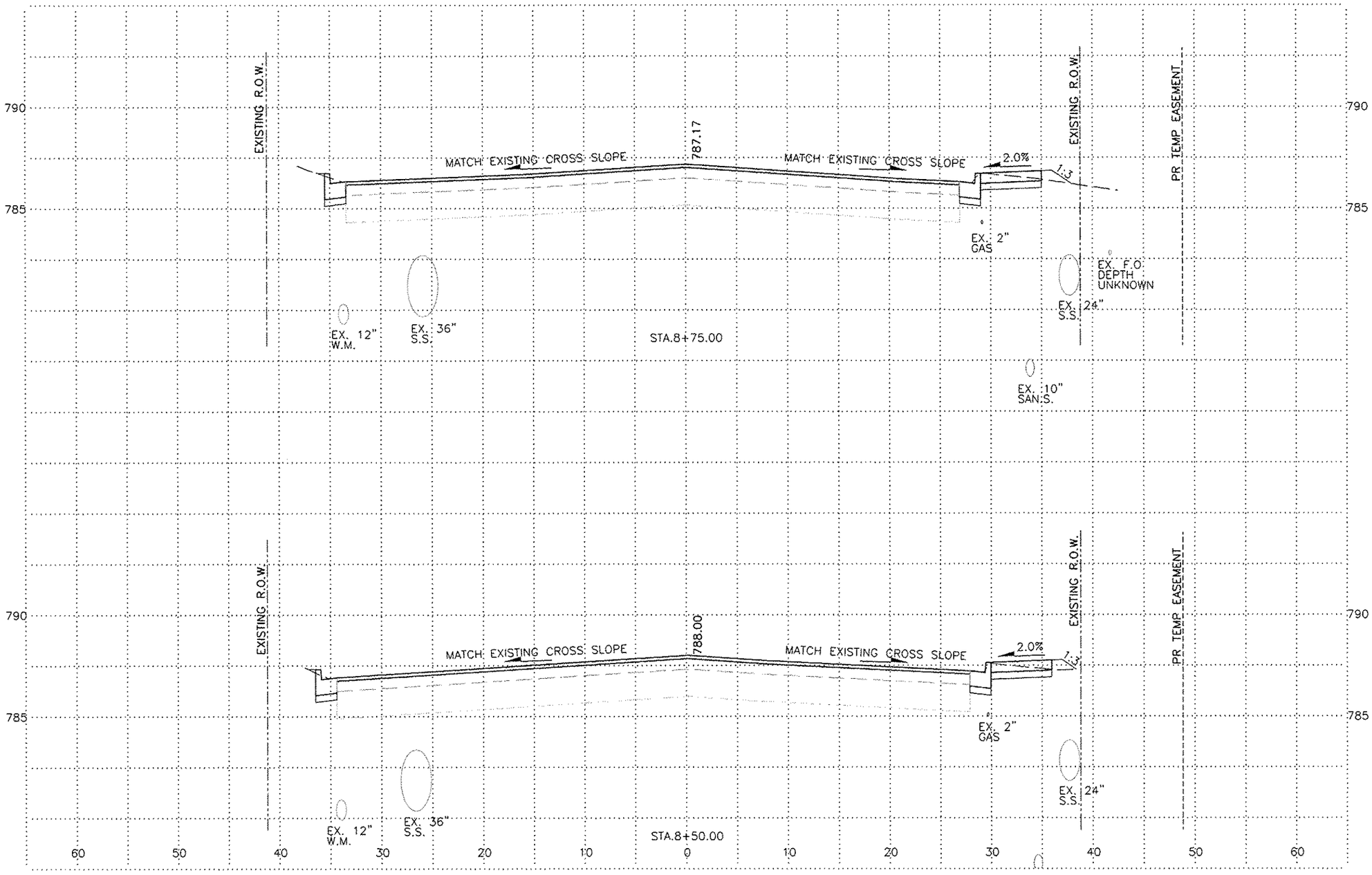

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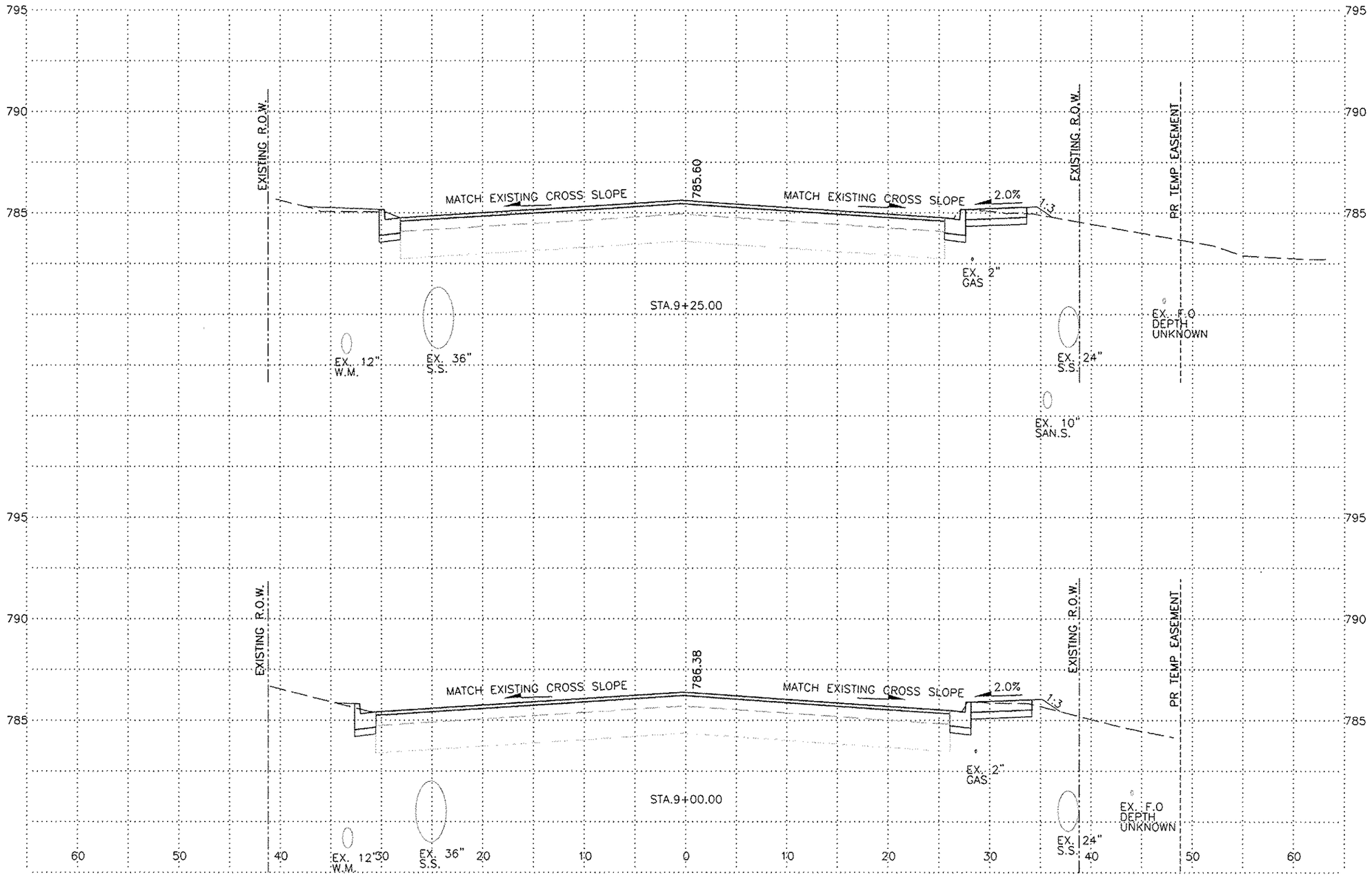

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14-592

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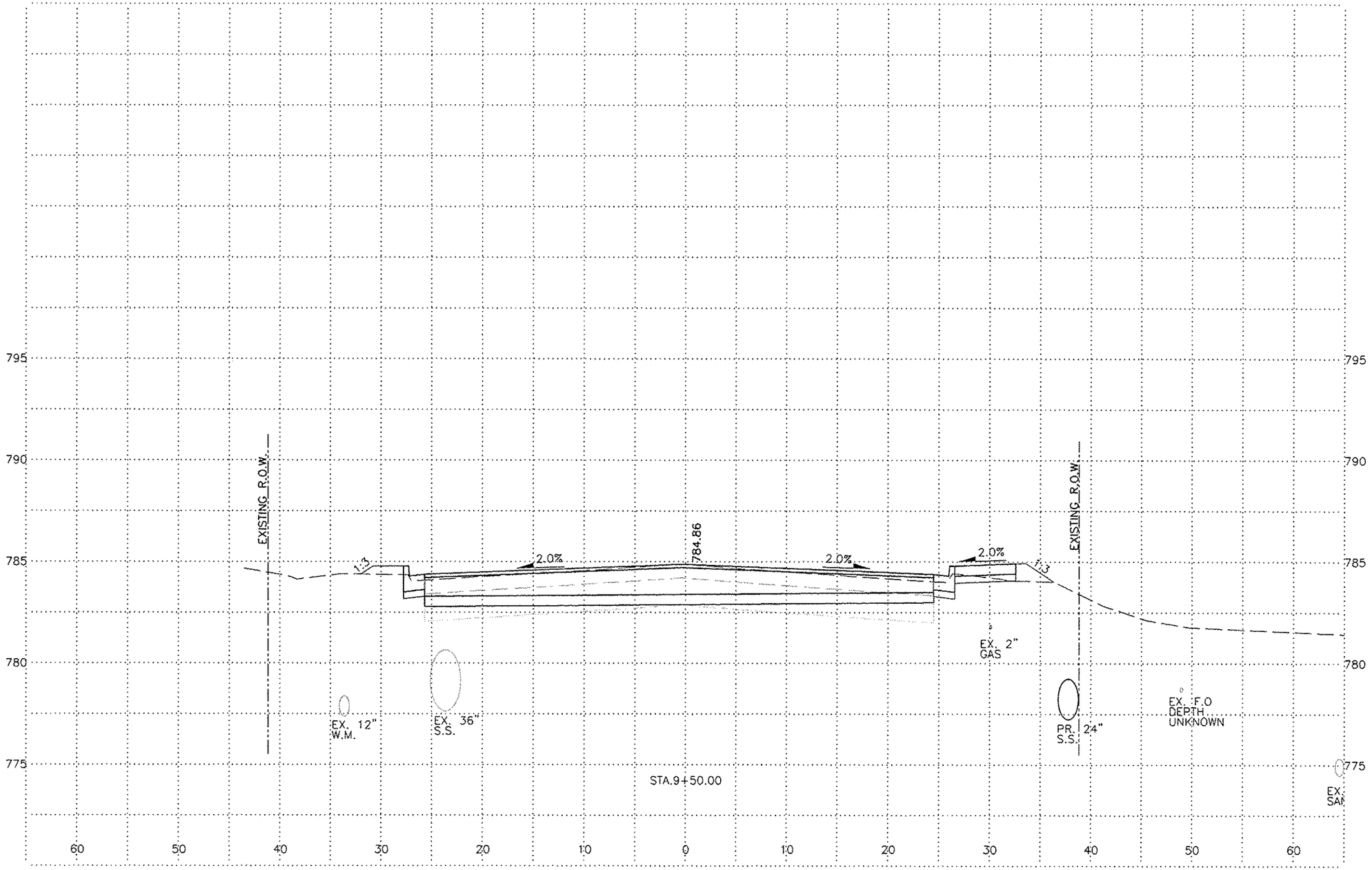

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JOB NUMBER:
14-592

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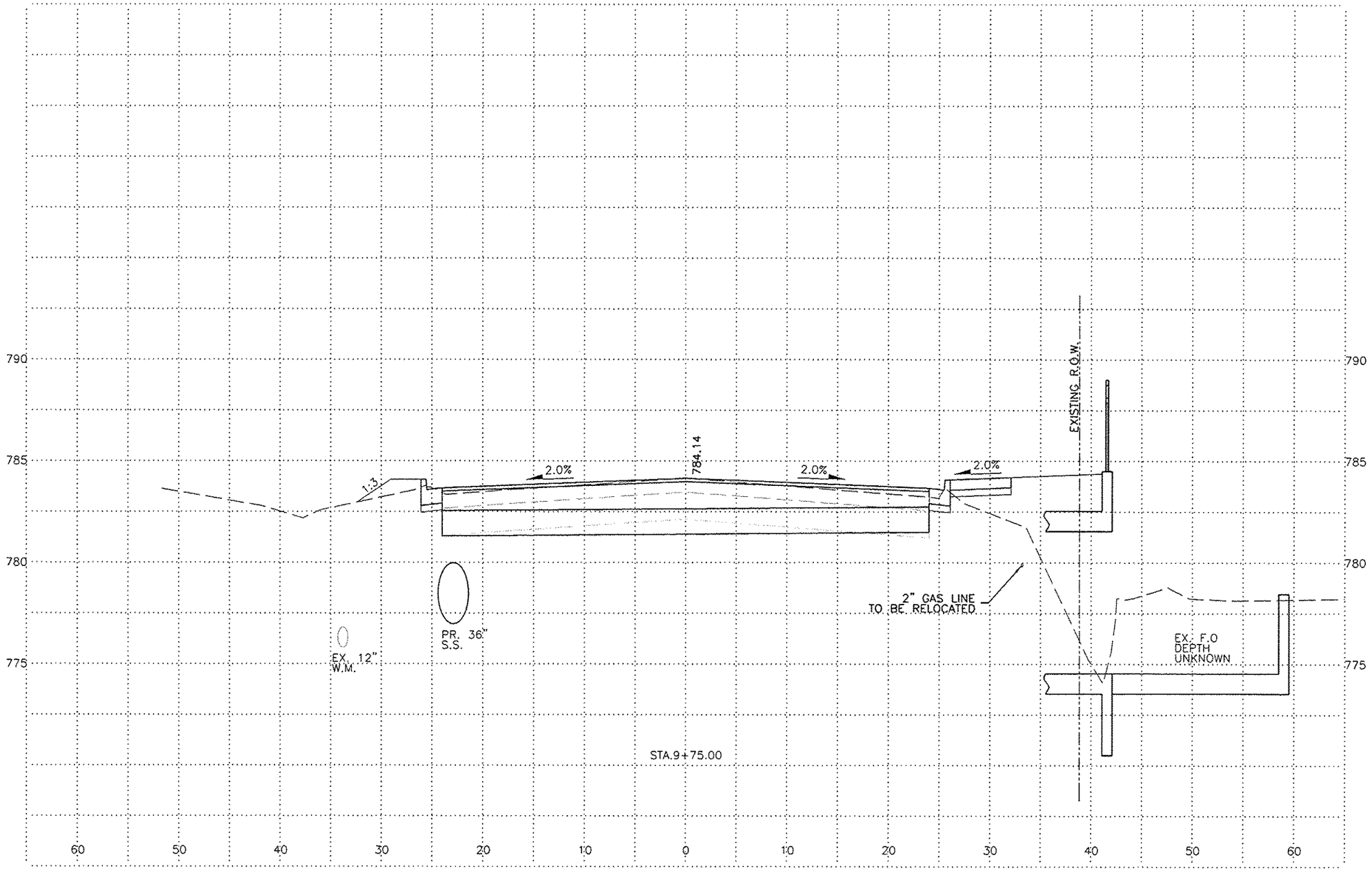

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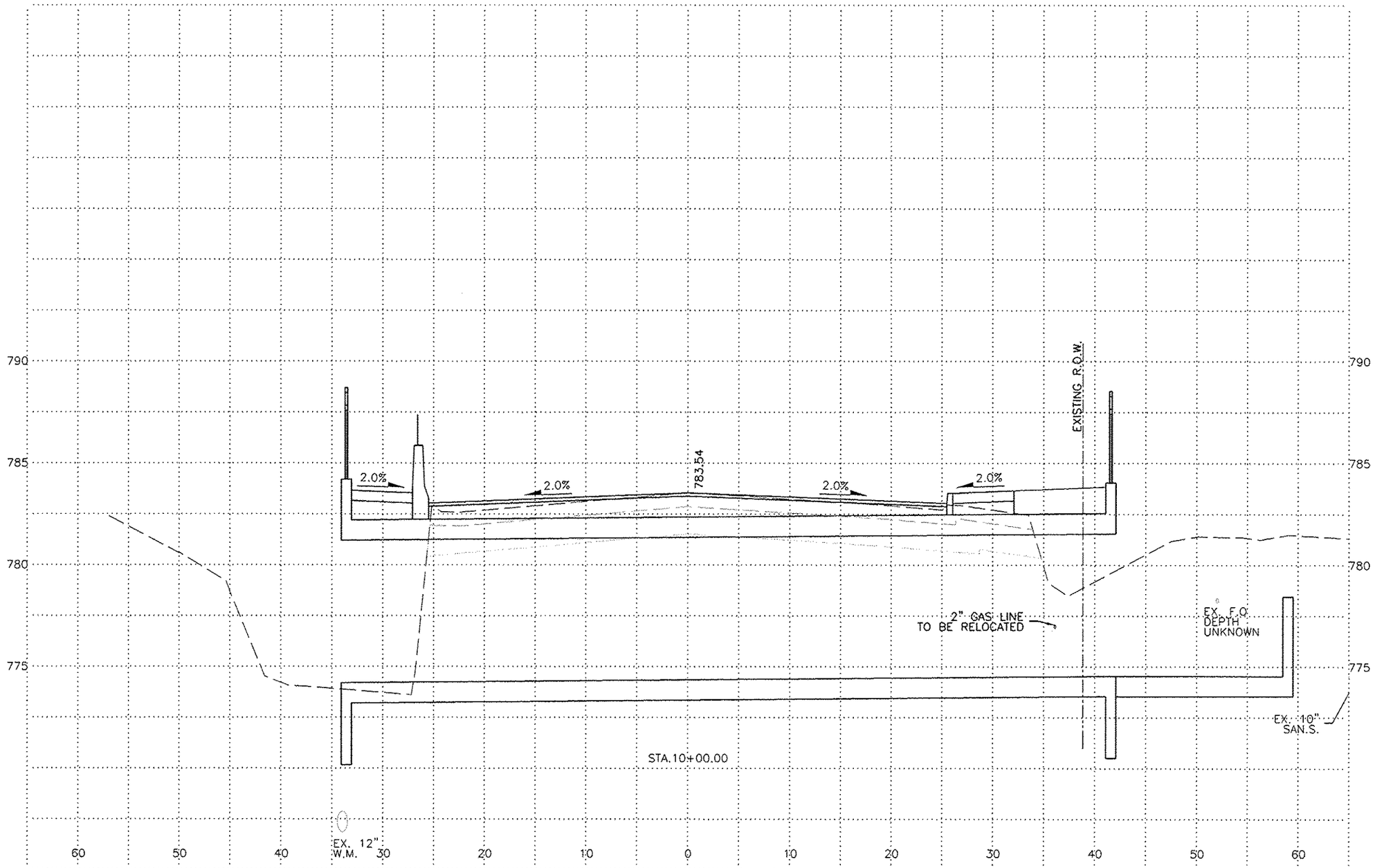

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JOB NUMBER:
14-592

SHEET NUMBER:
76 of 82

PLOT DATE: 3/3/2015

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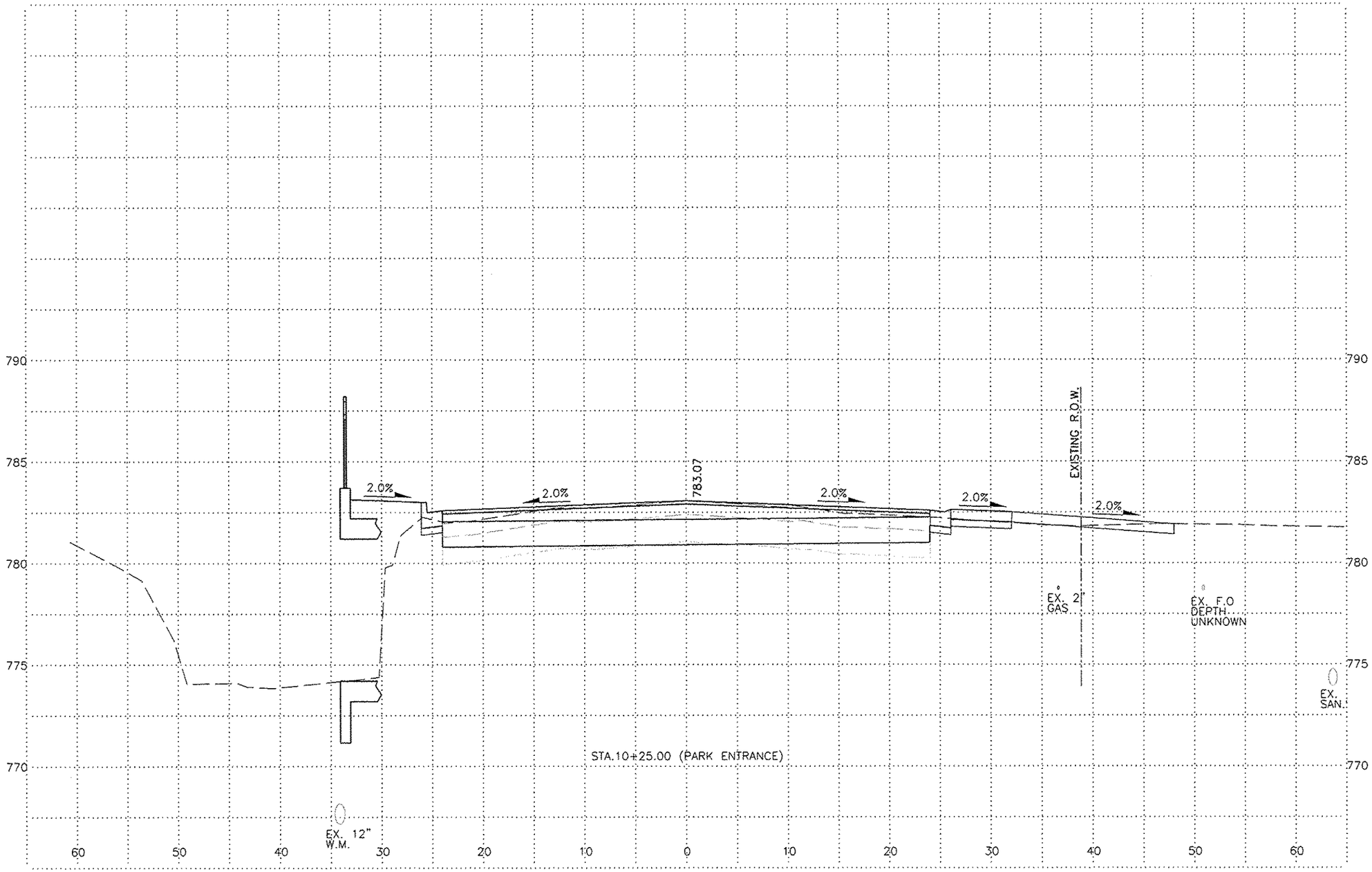

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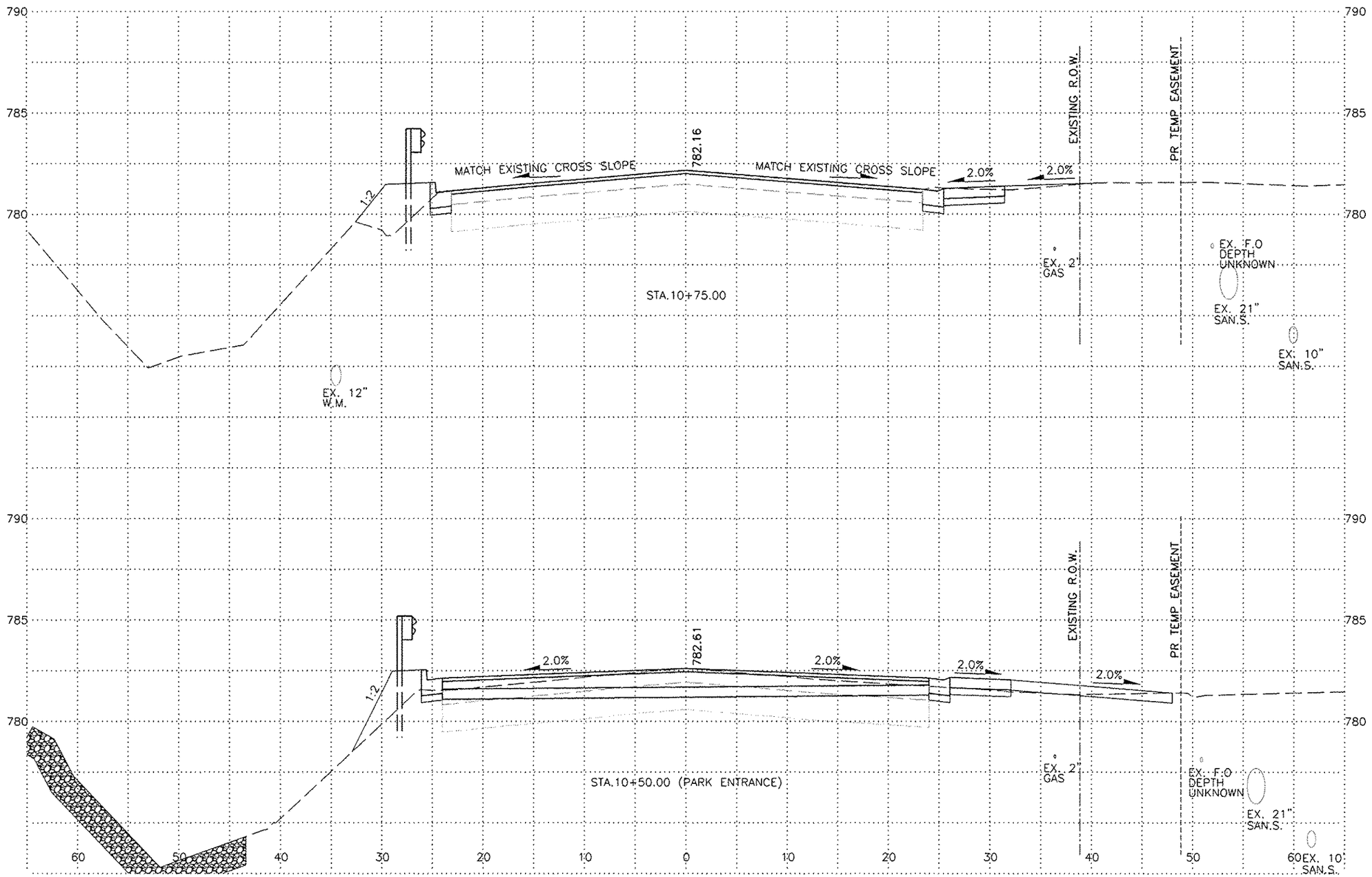

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14-592

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78 of 82

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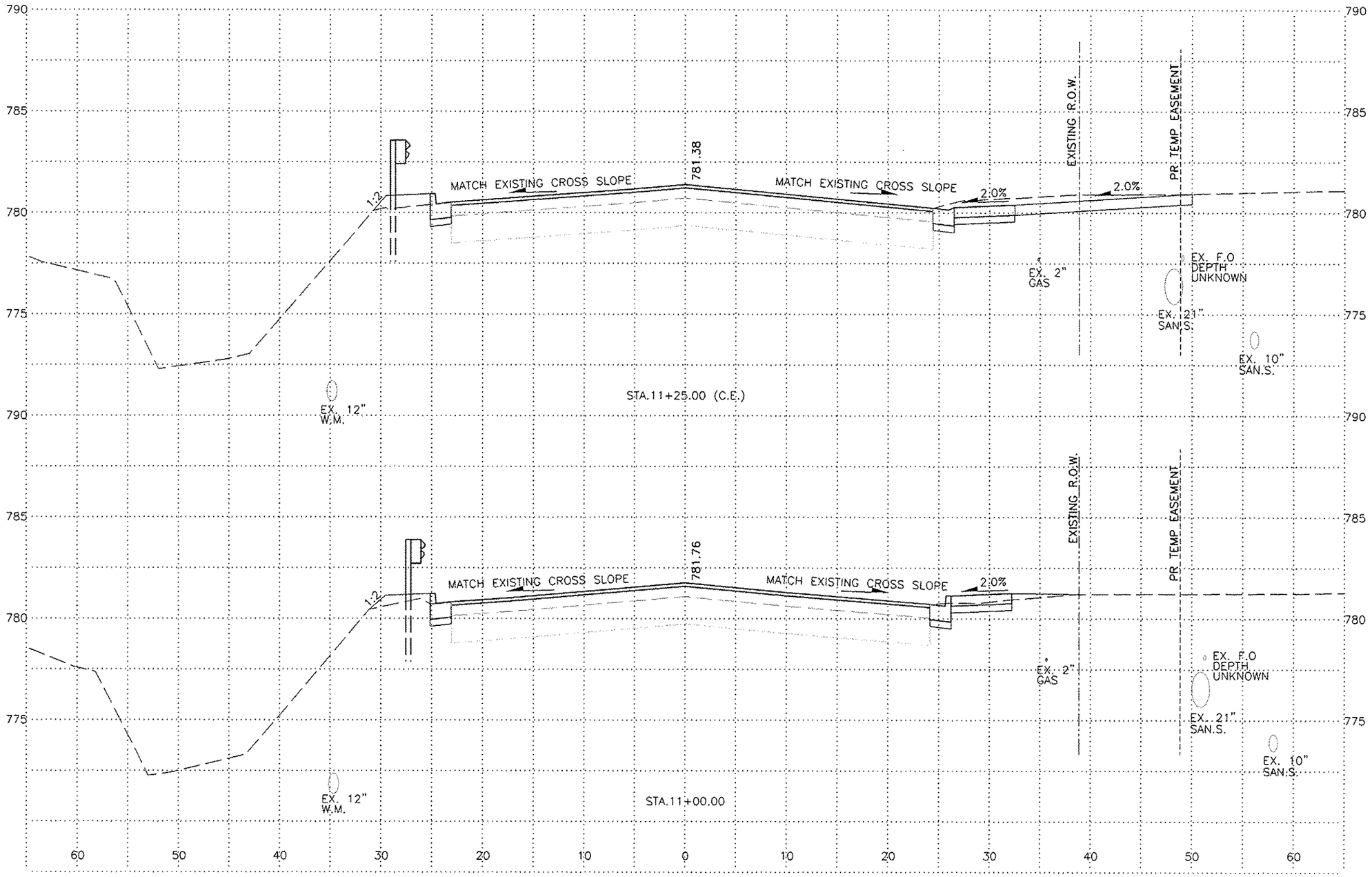

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79 of 82

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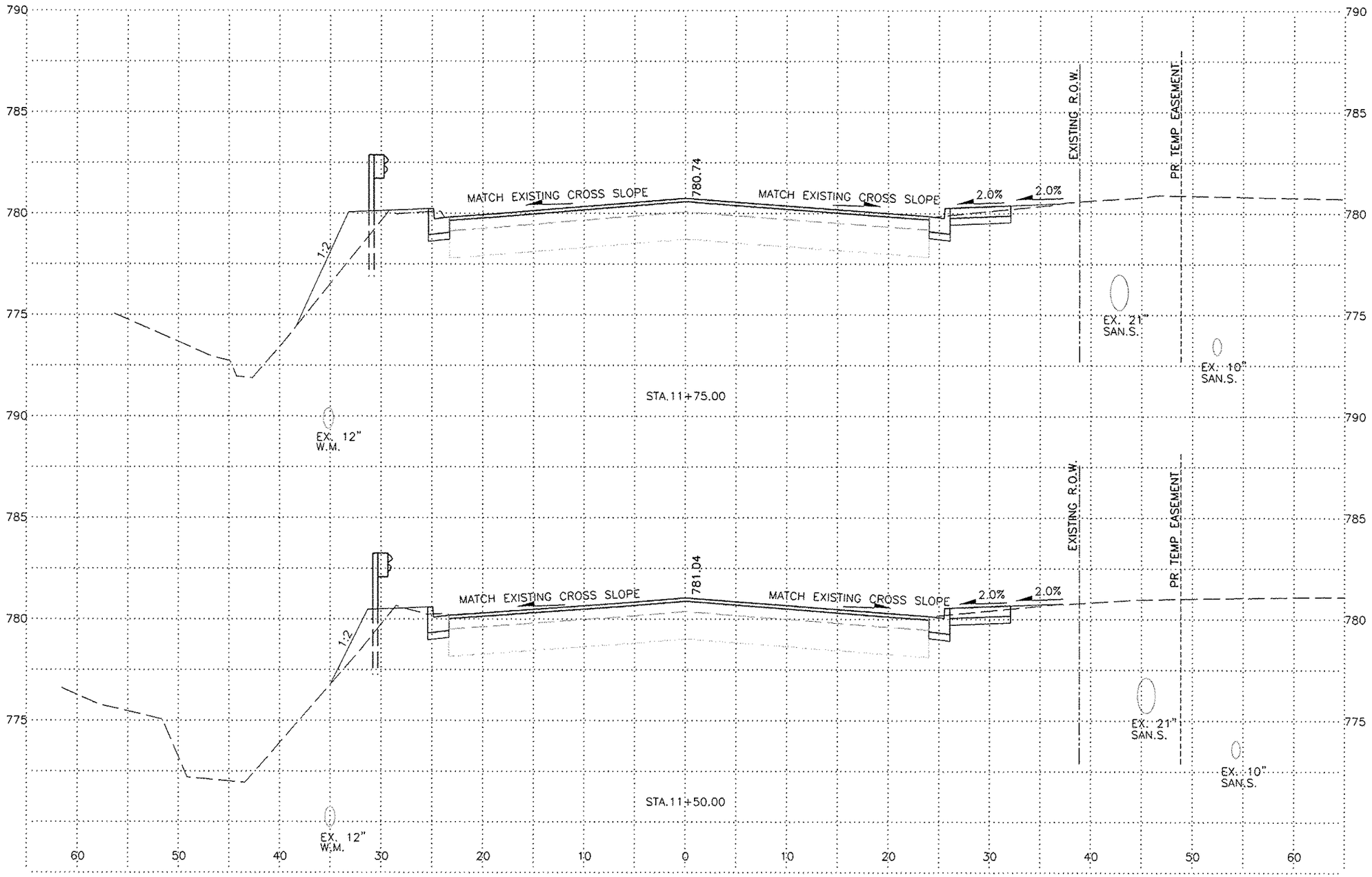

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JOB NUMBER:
14-592

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80 of 82

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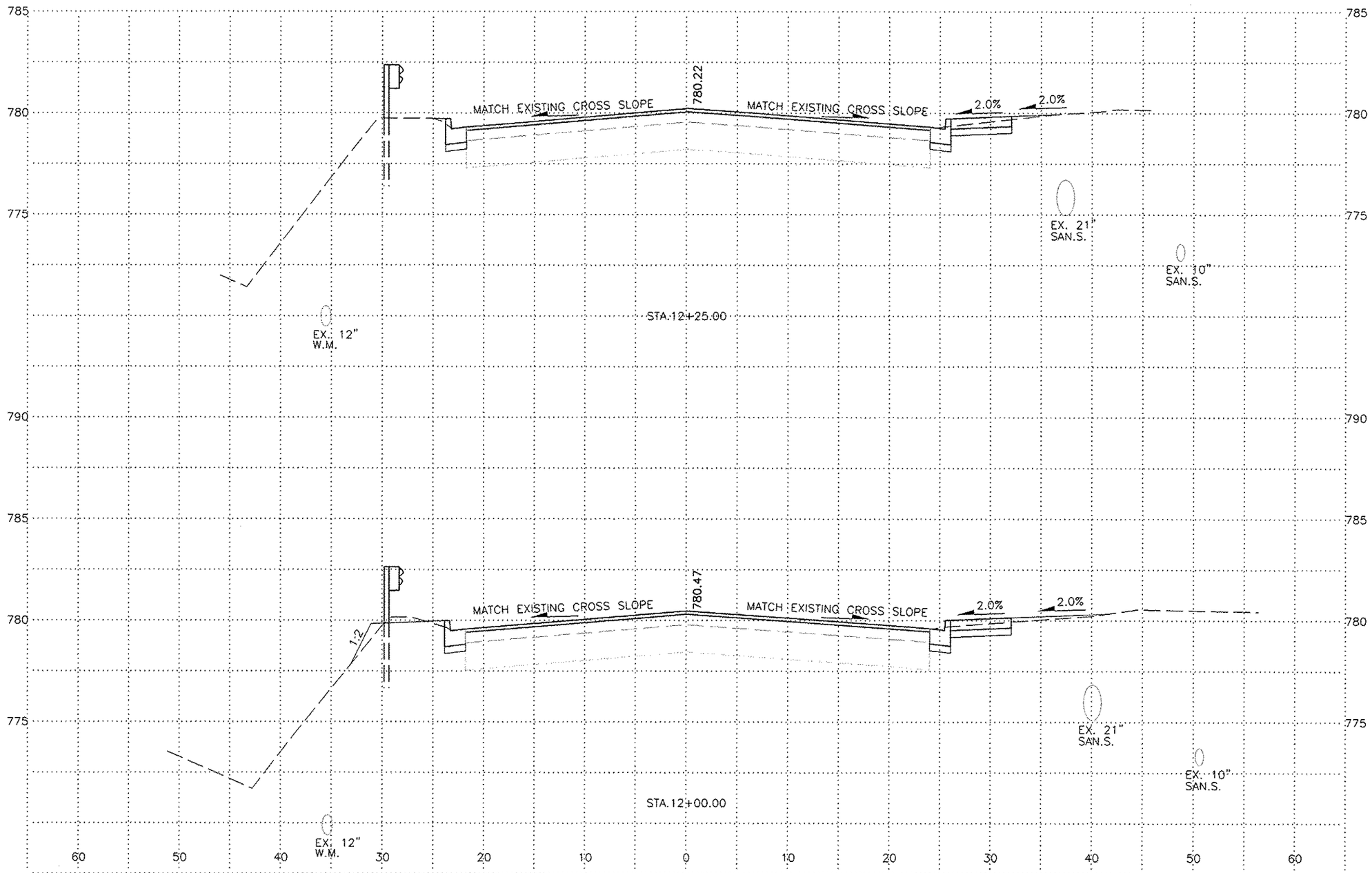

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14-592

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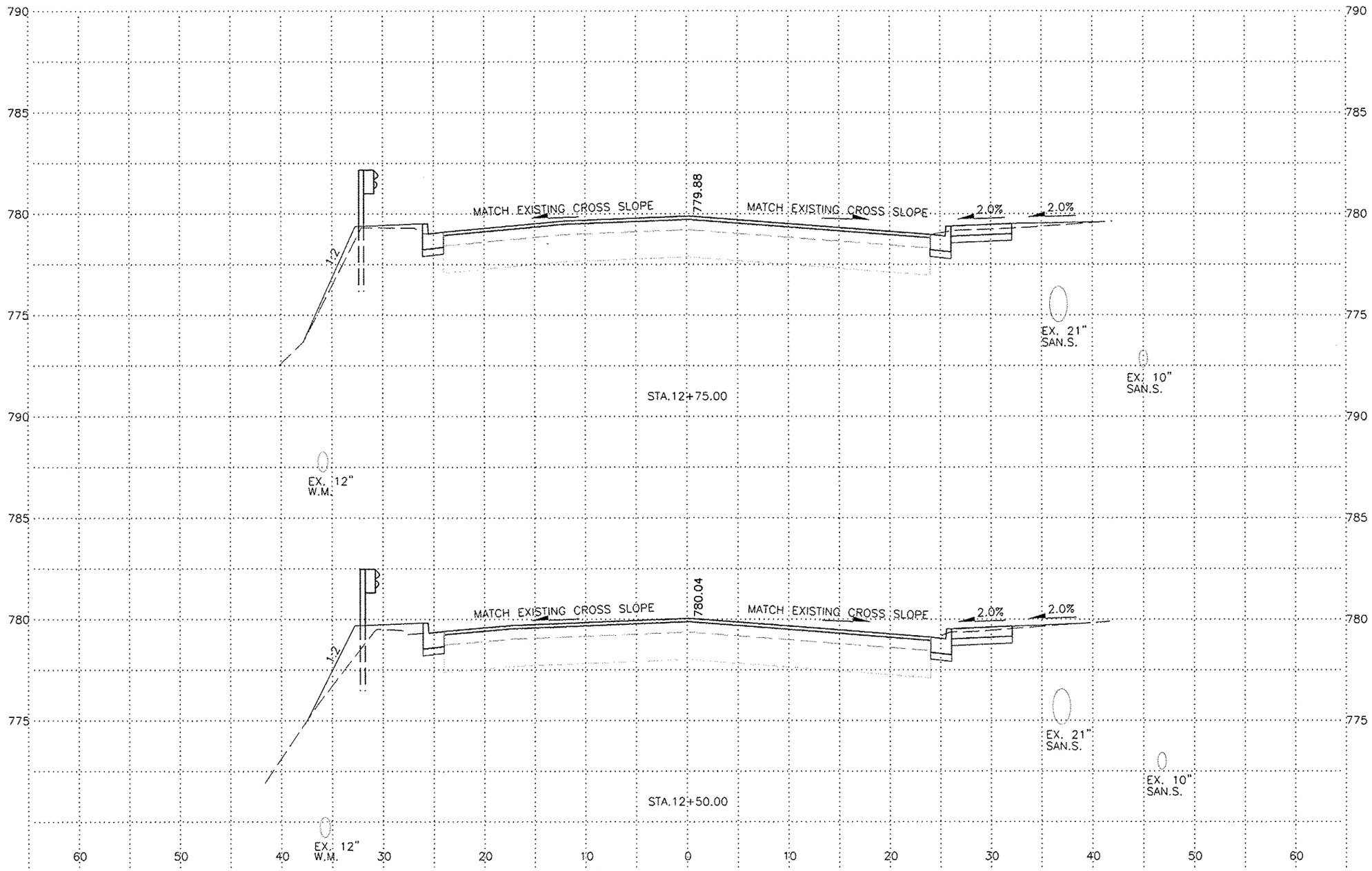
85619



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