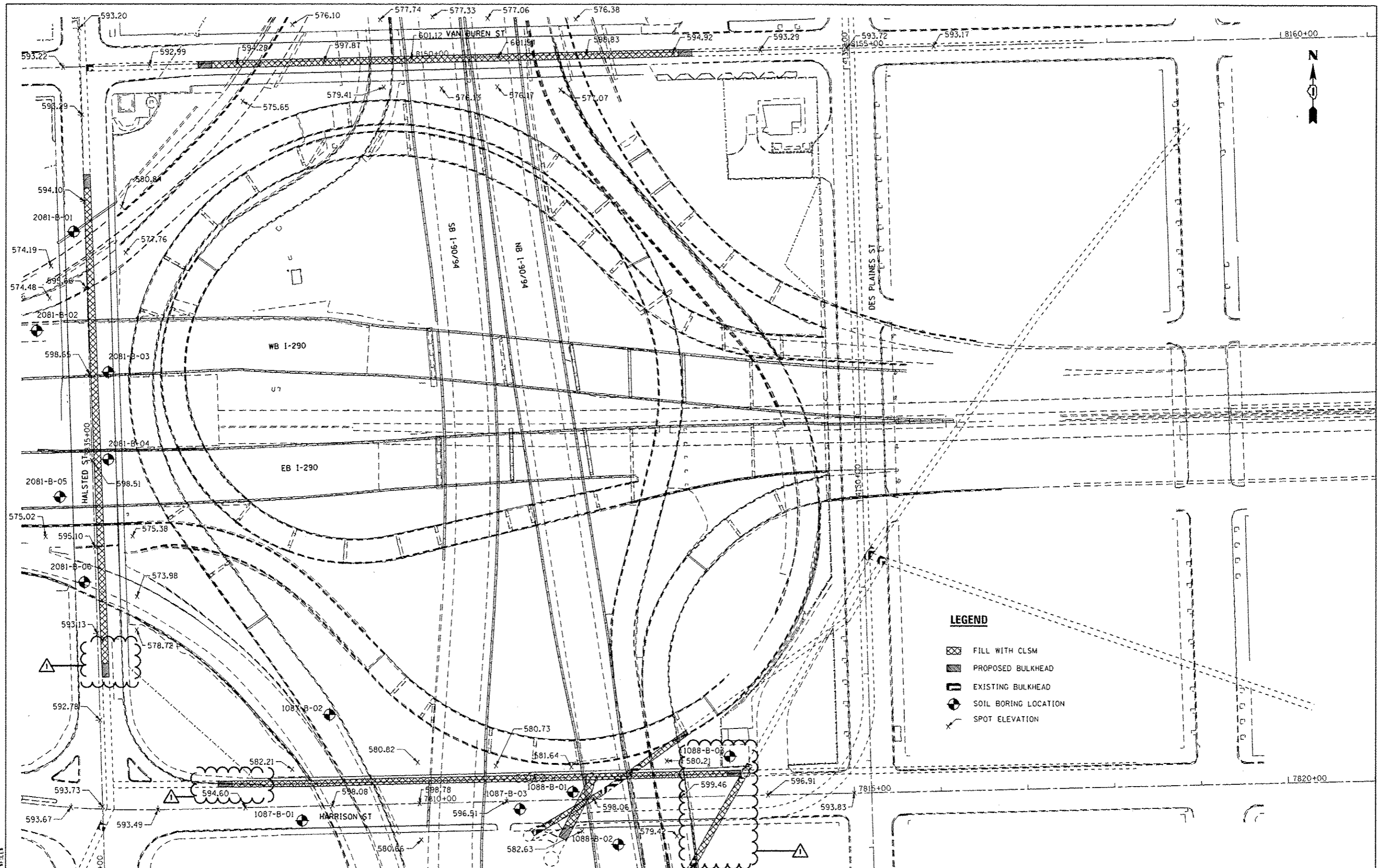


CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				URBAN ROADWAY	UTILITY
				0004	0043
X0327599	BULKHEAD TUNNEL	LSUM	1	1	
X0327600	BULKHEAD TUNNEL (SPECIAL)	LSUM	1	1	
X5930100	CONTROLLED LOW-STRENGTH MATERIAL, SPECIAL	CU YD	3285.1	3285.1	⚠
56101178	DUCTILE IRON WATER PIPE FITTINGS-36"X24" 2 BELL MECHANICAL JOINT REDUCER	EACH	1		1
56101176	DUCTILE IRON WATER PIPE FITTINGS-30"X24" 2 BELL MECHANICAL JOINT REDUCER	EACH	1		1
56104322	DUCTILE IRON WATER PIPE FITTINGS-24" 2 BELL MECHANICAL JOINT 1/4 BASE BEND	EACH	2		2
56104324	DUCTILE IRON WATER PIPE FITTINGS-36" MECHANICAL JOINT SLEEVE	EACH	1		1
56104328	DUCTILE IRON WATER PIPE FITTINGS-30" MECHANICAL JOINT SLEEVE	EACH	1		1
56105310	WATER MAIN CONTROL VALVE-16 INCH	EACH	1		1
① 20076600	TRAINEES	HOUR	500	500	
① 20076604	TRAINEES - TRAINING PROGRAM GRADUATE	HOUR	500	500	






9
① 0042

⚠ Rev. 6-4-13

Rev



LEGEND

-  FILL WITH CLSM
-  PROPOSED BULKHEAD
-  EXISTING BULKHEAD
-  SOIL BORING LOCATION
-  SPOT ELEVATION

FILE NAME: 1.WELES

COLLINS ENGINEERS

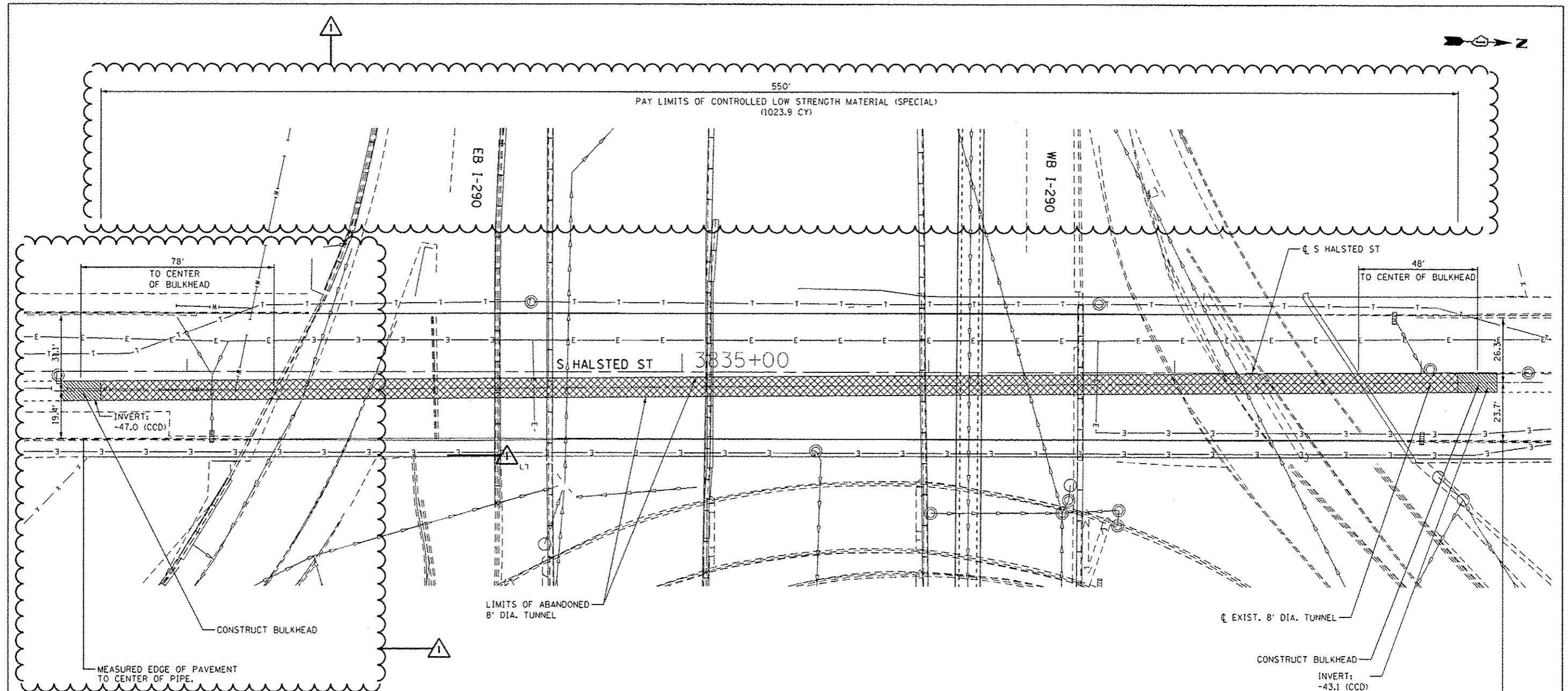
USER NAME: rge11	DESIGNED: -	REVISED: -	5/30/2013 R.A.G.
PLOT SCALE: 1/80.0000" = 1'	DRAWN: -	REVISED: -	
PLOT DATE: 5/30/2013	CHECKED: -	REVISED: -	
	DATE: -	REVISED: -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**OVERALL BULKHEAD AND
CONCRETE FILL PLAN**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.J. RTE. 90/94	SECTION 0101.6-2P-1-3 (13)	COUNTY COOK	TOTAL SHEETS 37	SHEET NO. 5
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W36	



- NOTES:
1. LOCATION OF EXISTING WATER TUNNEL SHOWN FROM EXISTING RECORD DRAWINGS WHICH HAVE BEEN INCLUDED TO AID THE CONTRACTOR IN LOCATING THE EXISTING TUNNEL. THE CONTRACTOR SHALL LOCATE THE EXISTING TUNNEL AS DESCRIBED IN THE SPECIAL PROVISIONS. THIS WORK SHALL BE PAID FOR AS "LOCATE TUNNEL".
 2. ABANDONED TUNNEL SHALL BE FILLED WITH CLSM BETWEEN PROPOSED BULKHEADS.

LEGEND

	PROPOSED BULKHEAD
	EXISTING BULKHEAD
	FILL WITH CONTROLLED LOW STRENGTH MATERIAL (SPECIAL)

FILE NAME: 1. 81515

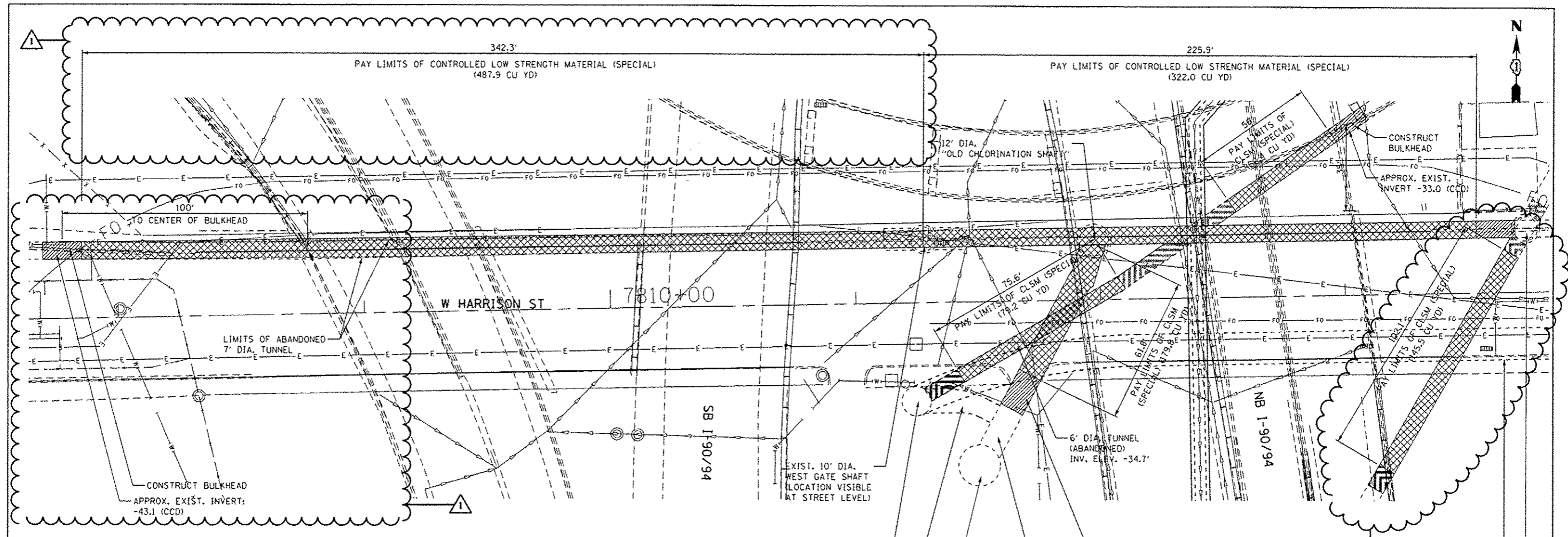
COLLINS ENGINEERS

USER NAME: rge011	DESIGNED: 5/30/2013 R.A.G.	REVISED: -
PLOT SCALE: 1/8" = 1'-0"	DRAWN: -	REVISED: -
PLOT DATE: 5/30/2013	CHECKED: -	REVISED: -
	DATE: -	REVISED: -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PLAN - LOCATION NO. 2 HALSTED STREET			
SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	

F.A.J. RTE. 90/94	SECTION 0101.6-2P-1-3 (13)	COUNTY COOK	TOTAL SHEETS 37	SHEET NO. 10
CONTRACT NO. 60W36				
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				

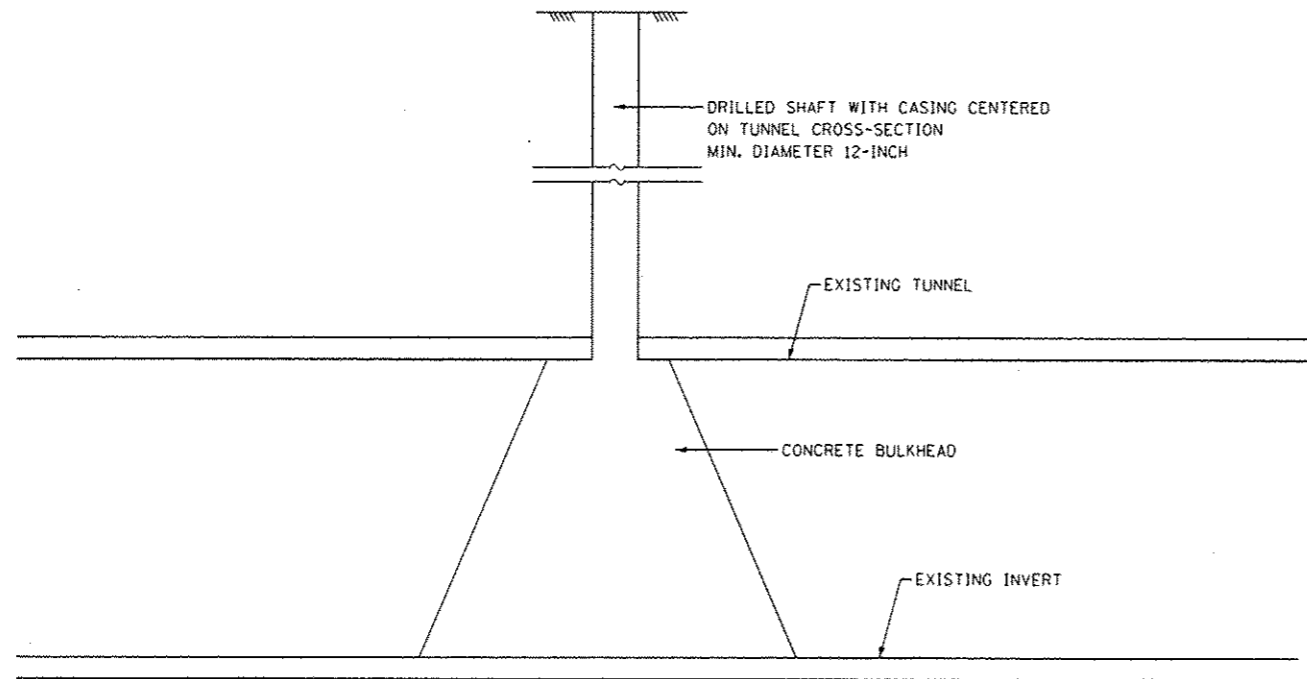


- NOTES:
1. LOCATION OF EXISTING WATER TUNNEL SHOWN FROM EXISTING RECORD DRAWINGS WHICH HAVE BEEN INCLUDED TO AID THE CONTRACTOR IN LOCATING THE EXISTING TUNNEL. THE CONTRACTOR SHALL LOCATE THE EXISTING TUNNEL AS DESCRIBED IN THE SPECIAL PROVISIONS. THIS WORK SHALL BE PAID FOR AS "LOCATE TUNNEL".
 2. ABANDONED TUNNEL SHALL BE FILLED WITH CLSM BETWEEN PROPOSED BULKHEADS.
 3. SEE SHEETS 13-17 FOR ADDITIONAL DETAILS WITH REGARDS TO EXISTING TUNNEL CONFIGURATION AND CERMAK PUMP STATION 12' DIA. CHLORINATION SHAFT AND 17' DIA SCREEN GATE SHAFT.
 4. CONTRACTOR SHALL BE ADVISED THAT THE EXISTING WEST GATE SHAFT ON HARRISON IS IN THE OPEN POSITION AND THE TUNNEL ALONG HARRISON STREET IS FULL WITH WATER. SEE TUNNEL DETAIL NOTES ON SHEET 12 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
 5. CONCRETE SHALL VERIFY FIELD CONDITIONS OF INSERVICE WATER TUNNEL PRIOR TO THE START OF ANY WORK. SEE CONCRETE BULKHEAD, SPECIAL.

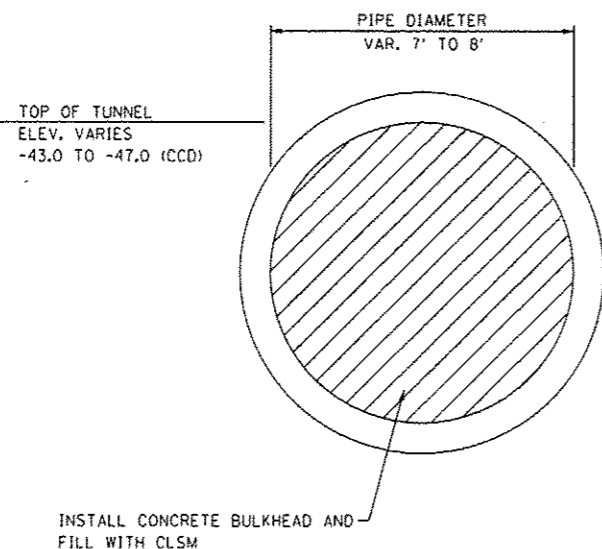
LEGEND

	PROPOSED BULKHEAD
	EXISTING BULKHEAD
	FILL WITH CONTROLLED LOW STRENGTH MATERIAL (SPECIAL)

COLLINS ENGINEERS	USER NAME : rge11	DESIGNED -	REVISED - 5/30/2013 R.A.G.	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN LOCATION NO. 3 HARRISON STREET	F.A.I. RTE. 90/94	SECTION 0101.6-2P-1-3 (13)	COUNTY COOK	TOTAL SHEETS 37	SHEET NO. 11
	PL0T SCALE : 40.0000 1/2" = 1'	DRAWN -	REVISED -			SCALE: SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 60W36			
	PL0T DATE : 5/30/2013	CHECKED -	REVISED -			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				
		DATE -	REVISED -							



TYPICAL SECTION
PROPOSED BULKHEAD
VAN BUREN STREET
HALSTED STREET
HARRISON STREET



TYPICAL SECTION
EXISTING WATER TUNNEL
VAN BUREN STREET
HALSTED STREET
HARRISON STREET

TUNNEL NOTES:

THE WATER TUNNELS SHOWN ARE FROM CDWM RECORD DRAWINGS AND ARE INCLUDED FOR CONTRACTOR INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY LOCATE THE CROWN OF THE WATER TUNNELS USING PROBE BORINGS, PER CDWM REQUIREMENTS.

THE EXISTING WATER TUNNELS ARE ABANDONED. THE CONTRACTOR SHALL PROVIDE DEWATERING AS NEEDED IN THE EXISTING WATER TUNNELS. THE MAXIMUM DISCHARGE RATE SHALL BE 300 GPM. FOR ABANDONED AND INACCESSIBLE TUNNELS, THE CONTRACTOR SHALL TAKE INTO CONSIDERATION THAT WATER HAS INFILTRATED THE EXISTING TUNNELS AND THEY ARE FILLED TO CAPACITY WITHIN AND BEYOND THE PROJECT LIMITS. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT INCLUDED IN THE COST OF CONTROLLED LOW STRENGTH MATERIAL (SPECIAL).

OBTAIN TWO CORE SAMPLES PER BULKHEAD, ONE (1) AT THE 10 AND ONE (1) AT THE 4 O'CLOCK POSITIONS OR ONE (1) AT THE 2 AND ONE (1) AT THE 8 O'CLOCK POSITIONS FOR COMPRESSION STRENGTH TESTING.

INSTALLATION OF GROUT OR CLSM SHALL NOT TAKE PLACE UNTIL THE CONCRETE STRENGTH OF THE BULKHEAD ACHIEVES 2,000 PSI IN 2-3 DAYS AFTER PLACEMENT. CONCRETE CYLINDERS SHALL BE CAST AND BROKEN TO VERIFY THE BULKHEAD CONCRETE COMPRESSIVE STRENGTH. SUBMIT THE TEST RESULTS TO THE ENGINEER FOR APPROVAL.

THE GROUT OR CLSM SHALL HAVE A MINIMUM SPREAD DIAMETER OF 20-INCHES USING AN INVERTED SLUMP CONE, APPROVED BY THE ENGINEER.

THE WATER TUNNEL AND SHAFT FILLING SHALL BE PERFORMED IN FOUR (4) LIFTS. THE FOURTH LIFT INTO THE DRILLED ACCESS HOLE SHALL EXTEND A MINIMUM OF 10 FEET ABOVE THE TOP OF THE EXISTING CROWN OF THE WATER TUNNEL. THE CONTRACTOR SHALL LET THE CLSM SET A MINIMUM 24-HOUR PERIOD BETWEEN LIFTS. THE MINIMUM STRENGTH OF THE CLSM SHALL NOT BE LESS THAN 125 PSI.

THE CONTRACTOR MAY INSTALL AND UTILIZE FILL/VENT PIPE(S) TO FILL THE WATER TUNNEL. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE EXISTING TUNNEL INVERTS. THE CONTRACTOR SHALL ENSURE THE FILL/VENT PIPE(S) ARE SPACED SUCH THAT THE CLSM OR GROUT IS EQUALLY DISTRIBUTED BY GRAVITY FLOW WITHIN THE WATER TUNNEL.

BACKFILL THE BALANCE OF THE DRILLED SHAFTS WITH SAND, A MINIMUM OF 72-HOURS AFTER THE PLACEMENT OF THE GROUT OR CLSM.

SCHEDULE OF QUANTITIES

	LOCATE TUNNEL	BULKHEAD TUNNEL	BULKHEAD TUNNEL (SPECIAL)	CONTROLLED LOW STRENGTH MATERIAL (SPECIAL)
	L SUM	L SUM	L SUM	CU YD
LOCATION 1 (VAN BUREN ST)	0.2	0.29	0	994.5
LOCATION 2 (HALSTED ST)	0.2	0.29	0	1023.9
LOCATION 3 (HARRISON STREET)	0.6	0.42	1	1266.7
TOTAL	1	1	1	3285.1

HOT-MIX ASPHALT MIXTURE REQUIREMENTS MIXTURE TYPE	AIR VOIDS @ Ndes
PATCHING	
HMA REPLACEMENT OVER PATCHES (HMA BINDER IL-19 mm) (2-1/4" MIN.)	4% @ 70 CYR.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURES IS 112 LBS/50 YD / IN.

THE "AC TYPE" FOR ALL POLYMERIZED HMA MIXES SHALL BE SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY THE DISTRICT ONE SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIAL, SEE SPECIAL PROVISIONS.

FILE NAME: *.RFILE*

COLLINS ENGINEERS

USER NAME : rgall	DESIGNED -	REVISED -	5/30/2013 R.A.G.
PLOT SCALE : 1/8"=1'-0"	DRAWN -	REVISED -	
PLOT DATE : 5/30/2013	CHECKED -	REVISED -	
	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TUNNEL DETAILS AND NOTES

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
90/94	0101.6-2P-1-3 (13)	COOK	37	12
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			CONTRACT NO. 60W36	