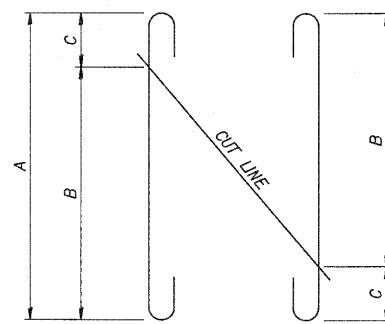
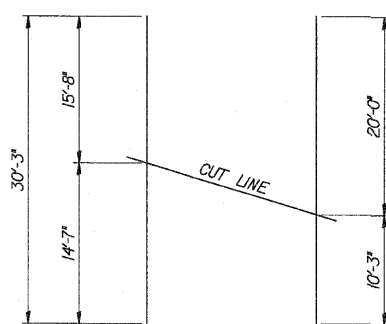


**BILL OF MATERIAL**

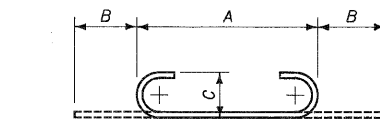
Bar No.	Size	Length	Shape		
a1	3/8	7	12'-10"		
a2	1/2	11	14'-4"		
a3	1/2	11	14'-8"		
a4	1/2	11	15'-1"		
a5	1/2	7	13'-4"		
a6	1/2	7	15'-2"		
a7	1/2	4	11'-8"		
a8	1/2	8	13'-6"		
a9	1/2	5	11'-8"		
a10	3/4	4	4'-8"		
a11	6	4	6'-0"		
a12	2	4	11'-10"		
a13	19	4	11'-2"		
a14	2	4	11'-8"		
a15	2	4	11'-10"		
a16	2	4	12'-2"		
a17	2	4	11'-8"		
a18	3	4	13'-6"		
a19	7	4	3'-8"		
a20	2	4	2'-0"		
a21	26	4	11'-2"		
a22	8	4	11'-6"		
a23	4	4	11'-11"		
d	15	4	4'-5"		
d1	15	4	4'-8"		
d2	44	5	3'-3"		
d3	22	5	11'-0"		
d4	22	5	12'-10"		
d5	42	4	11'-2"		
d6	42	4	3'-4"		
d7	31	4	3'-6"		
d8	6	7	4'-0"		
d9	8	7	4'-10"		
d10	11	4	6'-10"		
d11	3	7	5'-4"		
d12	5	4	4'-0"		
d13	5	4	4'-4"		
h	5	6	30'-3"		
h1	1	6	10'-3"		
h2	1	6	20'-0"		
h3	11	5	41'-1"		
h4	4	6	13'-7"		
h5	4	6	27'-10"		
h6	3	6	14'-8"		
h7	4	6	14'-1"		
h8	22	8	14'-4"		
h9	11	5	16'-11"		
h10	11	6	3'-9"		
h11	11	6	7'-11"		
h12	11	6	5'-3"		
h13	11	6	9'-6"		
h14	8	6	6'-9"		
h15	8	6	11'-0"		
h16	56	6	11'-2"		
h17	22	5	15'-11"		
h18	4	6	5'-3"		
h19	4	6	9'-5"		
h20	8	5	3'-9"		
h21	16	5	3'-4"		
h22	5	6	20'-5"		
h23	1	6	15'-3"		
h24	1	6	5'-1"		
h25	1	6	4'-0"		
h26	9	5	19'-4"		
h27	4	5	15'-4"		
h28	4	5	3'-8"		
h29	24	5	25'-3"		
h30	12	8	25'-3"		
h31	12	4	25'-3"		
h32	22	7	25'-3"		
h33	4	7	8'-2"		
v	67	4	5'-1"		
v1	23	5	8'-5"		
v2	44	5	2'-10"		
v3	14	5	6'-3"		
v4	21	5	9'-4"		
v5	96	4	11'-1"		
v6	85	4	2'-6"		
v7	40	4	2'-9"		
v8	1	4	6'-1"		
v9	2	4	7'-5"		
v10	1	4	8'-2"		
v11	1	4	8'-2"		
v12	2	4	6'-10"		
v13	1	4	6'-2"		
v14	1	4	5'-9"		
v15	2	4	4'-11"		
v16	1	4	5'-9"		
v17	2	4	5'-2"		
v18	1	4	4'-10"		
x	114	4	5'-5"		
x1	24	4	8'-8"		
x2	24	4	12'-8"		
x3	39	4	3'-10"		
x4	7	4	6'-10"		
CONCRETE BOX CULVERTS				CU. YD.	1309
REINFORCEMENT BARS				POUND	25,966



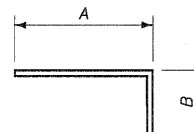
**BARS a1, a6 OR all**  
a1-16 BARS-1 SET  
a6-20 BARS-1 SET  
all-3 BARS-2 SETS



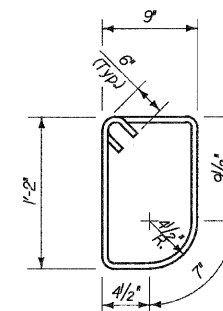
**BARS h**  
5 BARS-1 SET



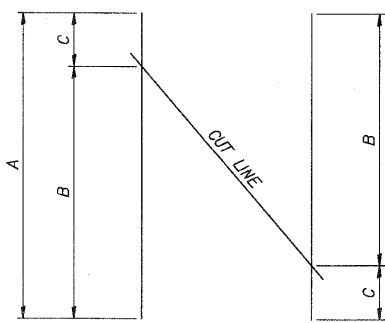
**BARS a THRU a6, a8, a10 OR all**



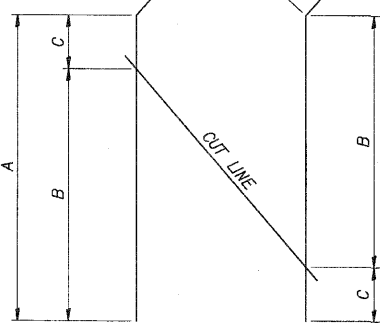
**BARS d, d2, d6, d7, d10 OR d13**



**BAR d1**

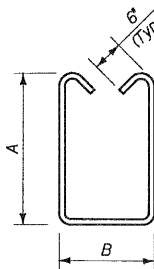


**BARS h3 OR h26**  
h3-11 BARS-1 SET  
h26-9 BARS-1 SET

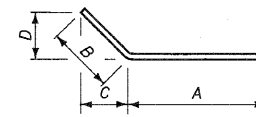


**BARS h8, h17 OR h65**  
h8-11 BARS-2 SETS  
h17-11 BARS-2 SETS  
h65-11 BARS-2 SETS

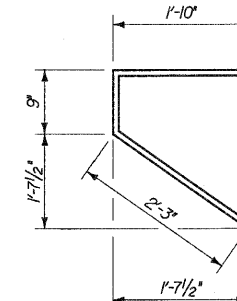
h8 = 2'-8"  
h17 = 1'-3"  
h65 = 1'-0"



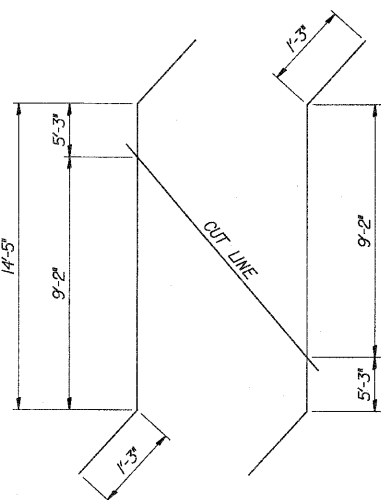
**BARS d3 THRU d5**



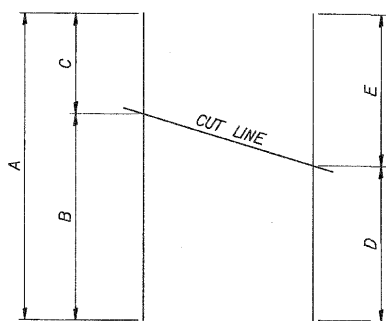
**BARS d8, d11, h8, h12 THRU h15, h17 OR h52 THRU h65**



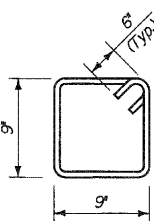
**BAR d9**



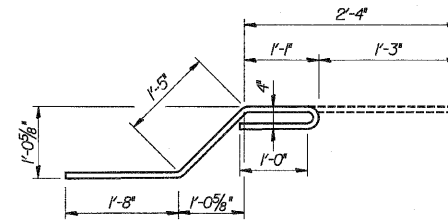
**BARS h9**  
11 BARS-1 SET



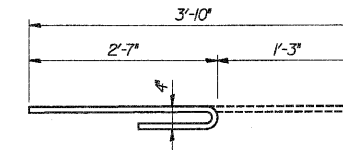
**BARS a12, a18 OR h22**  
a12-2 BARS-1 SET  
a18-3 BARS-1 SET  
h22-5 BARS-1 SET



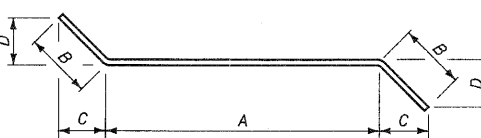
**BAR d12**



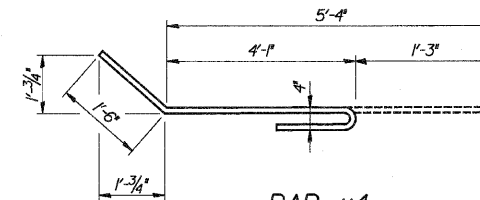
**BAR x**



**BAR x3**



**BAR h9**



**BAR x4**

**BAR BENDING DIAGRAMS**

Bar	A		B		C		D	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
a	11	2	0	10	0	7		
a1	13	4	0	10	0	7		
a2	11	2	1	7	1	2 1/2		
a3	11	6	1	7	1	2 1/2		
a4	11	11	1	7	1	2 1/2		
a5	11	8	0	10	0	7		
a6	13	6	0	10	0	7		
a8	11	8	0	11	0	8		
a10	3	8	0	6	0	4		
a11	5	0	0	6	0	4		
d	2	8	1	9				
d2	2	0	1	3				
d3	4	9	0	6				
d4	4	5	0	6				
d5	4	9	0	8				
d6	1	8	1	8				
d7	1	10	1	8				
d8	2	0	2	0	1	5	1	5
d10	5	2	1	8				
d11	3	4	2	0	1	5	1	5
d13	2	8	1	8				

Bar	A		B		C		D	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
h8	11	8	2	8	1	10 1/2	1	10 1/2
h9	14	5	1	3	0	10 1/2	0	10 1/2
h12	3	9	1	6	1	0 1/2	1	0 1/2
h13	8	0	1	6	1	0 1/2	1	0 1/2
h14	5	3	1	6	1	0 1/2	1	0 1/2
h15	9	6	1	6	1	0 1/2	1	0 1/2
h17	14	8	1	3	0	10 1/2	0	10 1/2
h52	11	3	3	0	2	9 1/2	1	1 1/2
h53	12	11	3	0	2	9	1	2
h54	5	0	3	0	2	9	1	2
h55	5	8	3	0	1	11 1/2	2	9 1/2
h56	5	5	3	0	1	2	2	9
h57	5	0	3	0	1	2	2	9
h58	3	0	2	11	2	9	1	2
h59	3	0	2	11	1	11 1/2	2	8 1/2
h60	3	10	3	0	2	9	1	2
h61	5	0	2	3	0	10 1/2	2	0 1/2
h62	5	8	3	0	2	9 1/2	1	1 1/2
h63	6	7	3	0	2	9	1	2
h64	5	0	3	0	2	9	1	2
h65	11	8	1	0	0	8 1/2	0	8 1/2

**BAR CUTTING DIAGRAMS**

Bar	A		B		C		D		E	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
a1	13	4	10	5	2	11				
a6	13	6	11	6	2	0				
a11	5	0	3	3	1	9				
a12	11	10	2	11	8	11	4	11	6	11
a18	13	6	2	0	11	6	5	10	7	8
h3	4	1	27	7	13	6				
h8	11	8	7	11	3	9				
h17	14	8	9	5	5	3				
h22	20	5	15	1	5	4	10	9	9	8
h26	19	4	15	4	4	0				
h65	11	8	7	11	3	9				

DESIGNED	ASP
CHECKED	LNB
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

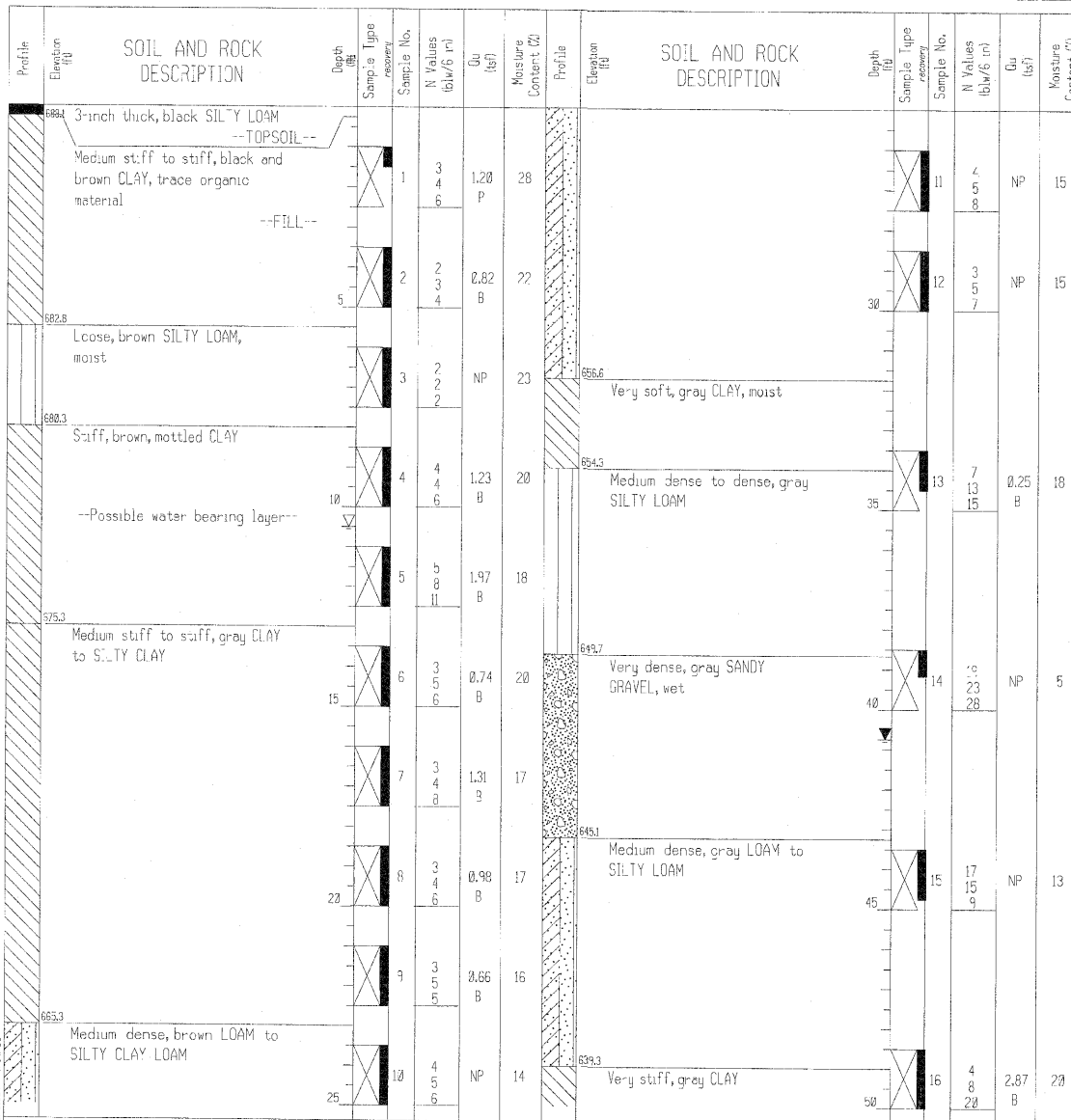
**CULVERT 'J'**  
**BARBILL & DETAILS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 182+31.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C013

**BORING LOG BS-007** Page 1 of 2

Wang Engineering, INC.  
wongeng3@wongeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US, 30, Will Co, IL, IDOT D-91-219-02  
Location: SEC 22, 23, 24, 19 T35N, R11, 12E

Date: NGVD  
Elevation: 688.33 ft  
North: 1765099.53 ft  
East: 1093982.43 ft  
Station: 181+88.41  
Offset: 56.97 LT



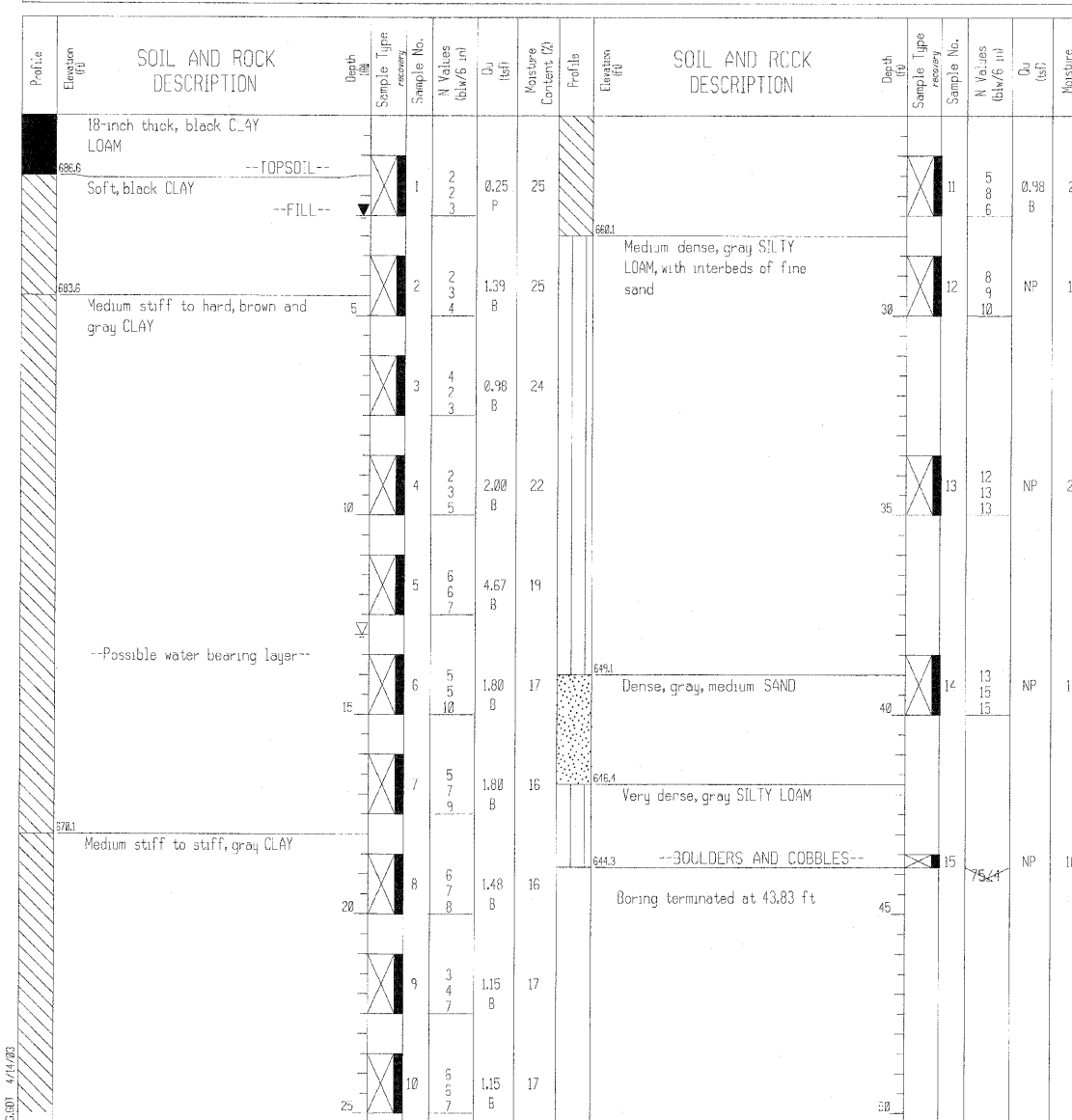
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-28-2003	Complete Drilling	01-29-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	E&A	Logger	J. Kasnick
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	2.25" SSA to 30 feet, 3.25" ID HSA thereafter; Boring back-filled with bentonite chips upon completion.	Depth to Water	NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

**BORING LOG BS-009** Page 1 of 1

Wang Engineering, INC.  
wongeng3@wongeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US, 30, Will Co, IL, IDOT D-91-219-02  
Location: SEC 22, 23, 24, 19 T35N, R11, 12E

Date: NGVD  
Elevation: 688.13 ft  
North: 1764955.40 ft  
East: 1094016.78 ft  
Station: 182+49.83  
Offset: 34.64 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-27-2003	Complete Drilling	02-27-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	E. Dancea
Checked by	S. Janowski	Time After Drilling	72 hours
Drilling Method	3.25" ID HSA; Boring back-filled with bentonite chips upon completion.	Depth to Water	13.00 ft
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**CULVERT 'J'**  
**BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 182+31.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C013

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 09479

 Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers wangeng@wangeng.com 1145 N. Main Street Lombard, IL 60148 Telephone: (630) 953-9928 Fax: (630) 953-9930	BORING LOG BS-120		Datum: NGVD	
	WEI Job No.: 301-01-02		Elevation: 694.24 Ft	
	Client: DLZ - Brighton Engineering, Inc.			North: 1764886.69 Ft
	Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02			East: 1094234.51 Ft
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21			Station: 184+88.00 Offset: 71.25	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample No.	Sample No. (ft)	SPT Values (blows/ft)	U <sub>c</sub> (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Sample No.	Sample No. (ft)	SPT Values (blows/ft)	U <sub>c</sub> (tsf)	Moisture Content (%)
693.2	12-inch thick, black, organic CLAY	1	3	3	2.52	30	693.2	Very stiff, gray CLAY	11	4	23	NA	13
	Soft to stiff, brown CLAY	2	3	4	0.41	28	684.2		12	6	23	3.20	15
		3	5	8	1.31	20							
		4	3	4	1.48	20							
		5	4	8	1.48	19							
688.2	Medium stiff to very stiff, gray SILTY CLAY to SILTY CLAY LOAM	6	3	12	1.31	16							
		7	4	9	0.82	15							
		8	15	25									
		9	6	10	1.31	13							
		10	6	14	2.30	12							

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	04-18-2005	Complete Drilling	04-18-2005	While Drilling	∇	DRY	
Drilling Contractor	DLZ	Drill. Rig	D-120 IMR	At Completion of Drilling	∇	DRY	
Driller	K&R	Logger	B. Panozzo	Time After Drilling		NA	
Checked by	S. Jarowski	Drilling Method	3.25" ID HSA; Boring backfilled upon completion	Depth to Water	∇	NA	

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

DLZ  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

CULVERT 'J'  
 BORING LOG  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 182+31.00  
 WILL COUNTY  
 STRUCTURE NUMBER 099-C013

BENCH MARK: BM 241  
 STA. 382+66.15, 87.43' RT. ELEV. 734.058  
 MARK ON THE SOUTHERLY FLANGE BOLT OF  
 SECOND HYDRANT EAST OF WASHINGTON  
 PARKWAY, SOUTH OF ROUTE 30.

EXISTING STRUCTURE: NO. UNKNOWN  
 24" Ø X 108' REINFORCED CONCRETE PIPE

NO SALVAGE.

PROPOSED IMPROVEMENTS:  
 EXISTING STRUCTURE TO BE REMOVED AND  
 REPLACED WITH A SINGLE 4'-0" X 3'-0" BOX  
 CULVERT IN STAGES MAINTAINING TWO LANES  
 OF TRAFFIC.

**DESIGN SPECIFICATIONS**

AASHTO 2002 SPECIFICATIONS.

**LOADING HS20-44**

ALLOW 50"/SQ.FT. FOR FUTURE WEARING SURFACE.

**DESIGN STRESSES**

**FIELD UNITS**

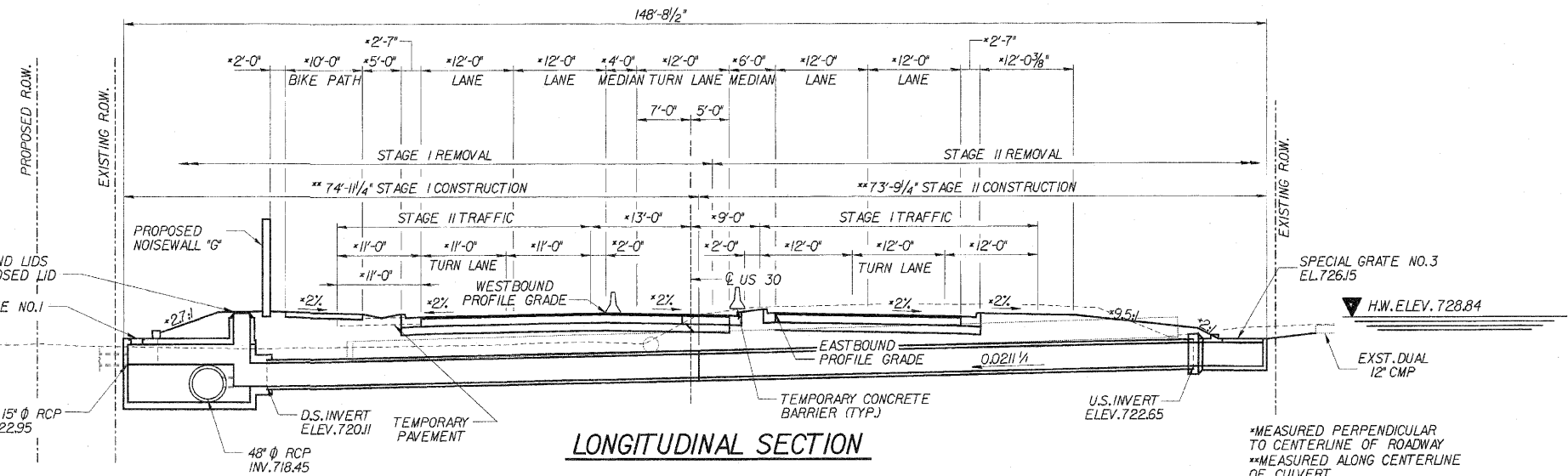
f'c = 3,500 PSI  
 fy = 60,000 PSI (REINFORCEMENT)

**PRECAST UNITS**

f'c = 5,000 PSI  
 fy = 60,000 PSI (REINFORCEMENT)

**GENERAL NOTES**

1. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR 60. SEE SPECIAL PROVISIONS.
2. EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER.
3. IN ACCORDANCE WITH ARTICLE 540.04 OF THE STANDARD SPECIFICATIONS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DIVERT STREAM FLOW DURING CONSTRUCTION IN ORDER TO KEEP THE CONSTRUCTION AREAS FREE OF WATER. THE METHOD OF WATER DIVERSION SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND THE COST SHALL BE INCLUDED WITH "REMOVAL OF EXISTING STRUCTURES NO. 8". CLEAN FILL (GRANULAR) MATERIAL WILL ONLY BE ALLOWED.
4. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M259 (DESIGN FILL HEIGHT = 3'-0").
5. A CANTILEVERED SHEET PILING DESIGN DOES NOT APPEAR FEASIBLE AND ADDITIONAL MEMBERS OR OTHER RETENTION SYSTEMS MAY BE NECESSARY. THE CONTRACTOR SHALL SUBMIT A TEMPORARY SOIL RETENTION SYSTEM DESIGN INCLUDING PLAN DETAILS AND CALCULATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER.

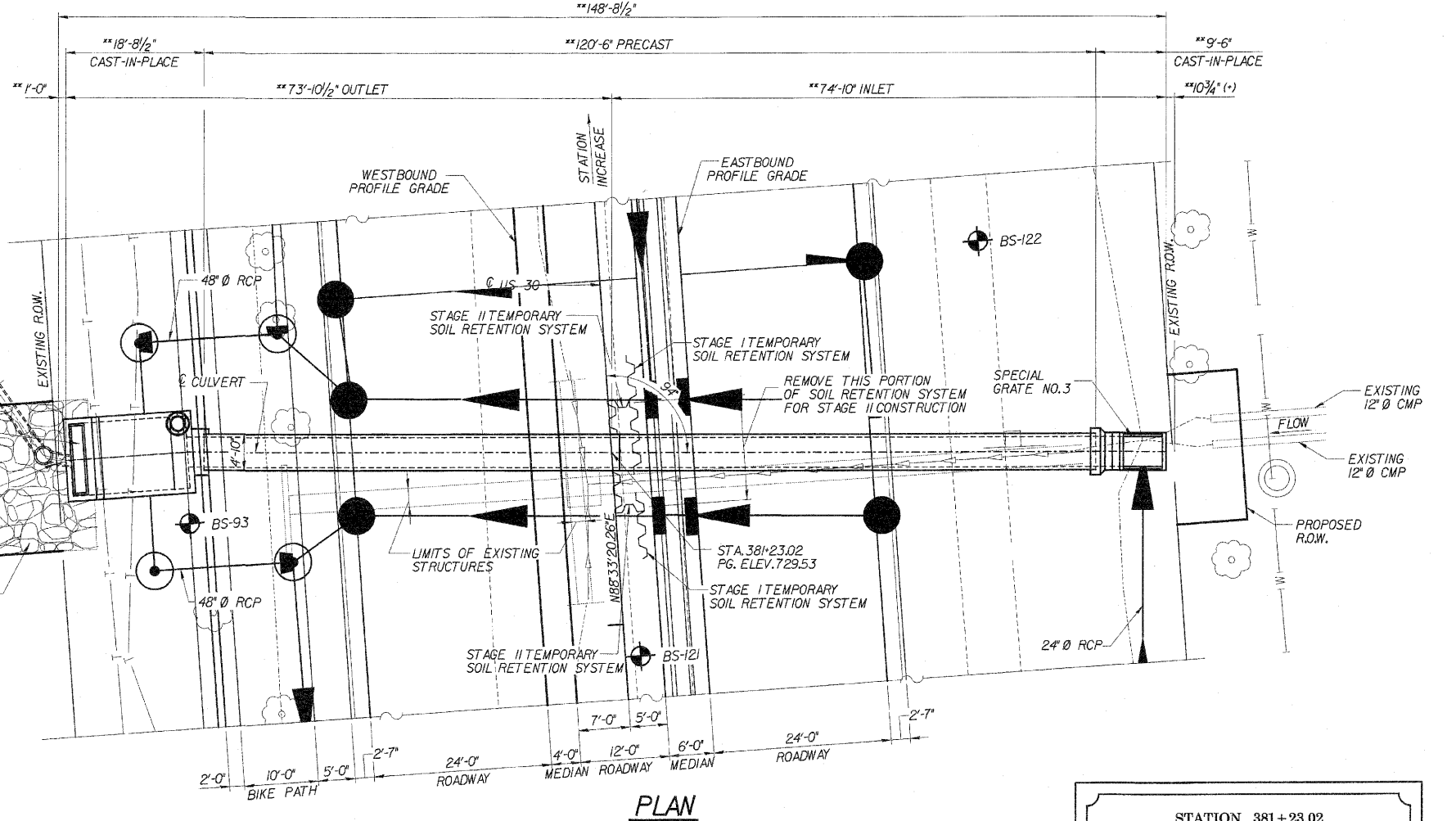


**LONGITUDINAL SECTION**

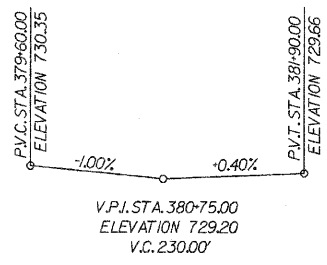
\* MEASURED PERPENDICULAR TO CENTERLINE OF ROADWAY  
 \*\* MEASURED ALONG CENTERLINE OF CULVERT

**TOTAL BILL OF MATERIALS**

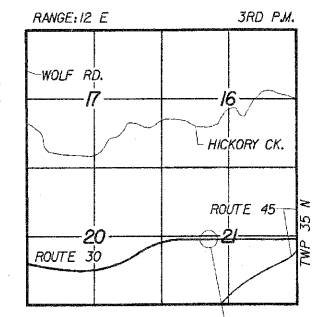
ITEM	UNIT	QUANTITY
STONE RIPRAP, CLASS A6	TON	50
FILTER FABRIC	SQ. YD.	40
REMOVAL OF EXISTING STRUCTURES NO. 8	EACH	1
REINFORCEMENT BARS	POUND	5,240
NAME PLATES	EACH	1
CONCRETE BOX CULVERTS	CU. YD.	25.3
PRECAST CONCRETE BOX CULVERT 4' X 3'	FOOT	120.5
FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	1
TEMPORARY SOIL RETENTION SYSTEM	SO. FT.	295
SPECIAL GRATE NO. 1	EACH	1
SPECIAL GRATE NO. 3	EACH	1



**PLAN**



**PROFILE GRADE**  
 @ P.G. W.B.D. & E.B.D.



**LOCATION SKETCH**

**WATERWAY INFORMATION**

DRAINAGE AREA (SQ. MI.) = 0.061		LOW GRADE ELEV. (FEET) EXIST = 731.00 @ STA. 385+74		MAX. RECORDED H.W.E. =						
		PROPOSED = 729.49 @ STA. 385+75								
FLOOD	FREQ. YR.	DISCHARGE C.F.S.	WATERWAY OPENING		NATURAL H.W.E.		CREATED HEAD		HEADWATER ELEVATION	
			EXISTING (square feet)	PROPOSED (square feet)	EXISTING U/S Face	PROPOSED U/S Face	EXISTING (feet)	PROPOSED (feet)	EXISTING	PROPOSED
OVERTOPPING (Ex.)	10	21	4.62	12.00	728.35	728.84	0.25	0.00	728.60	726.39
DESIGN	44	48	4.91	12.00	728.35	728.84	2.65	0.00	731.00	726.86
BASE	50	53	4.91	12.00	728.35	728.84	2.42	0.00	730.77	728.42
OVERTOPPING (Pr.)	100	103	4.91	12.00	728.35	728.84	2.74	0.00	731.09	729.49
MAX. CALC.	130	126	4.91	12.00	728.35	728.84	2.96	0.65	731.31	730.03
	500	446	4.91	12.00	728.35	728.84	2.96	1.19	731.31	730.03

STATION 381+23.02  
 BUILT BY  
 STATE OF ILLINOIS  
 FAP 353 SECT. (12 & 13) WRS-3  
 LOADING HS20  
 STR. NO. 099-C016

**NAME PLATE**

NOTE: SEE STANDARD DRAWING 515001 FOR NAME PLATE DETAILS.

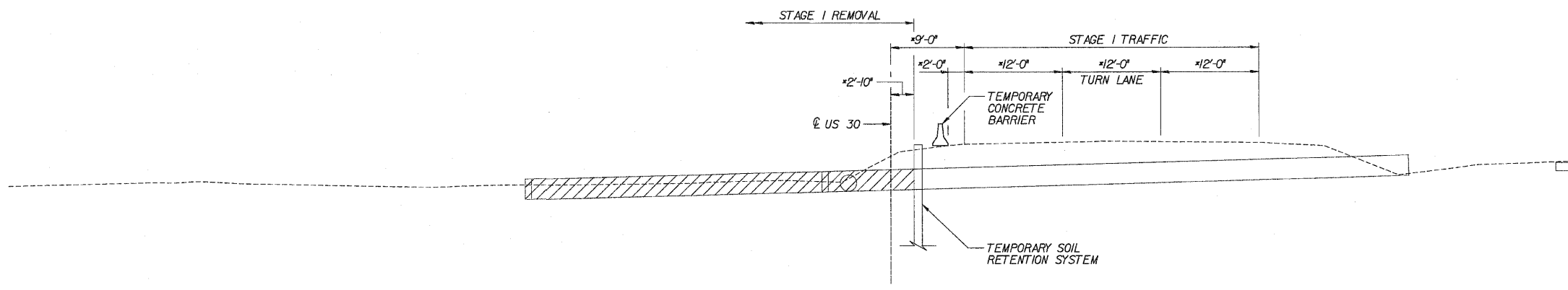
REVISIONS	
NAME	DATE

**CULVERT 'K'**  
**GENERAL PLAN**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 381+23.02  
 WILL COUNTY  
 STRUCTURE NUMBER 099-C016

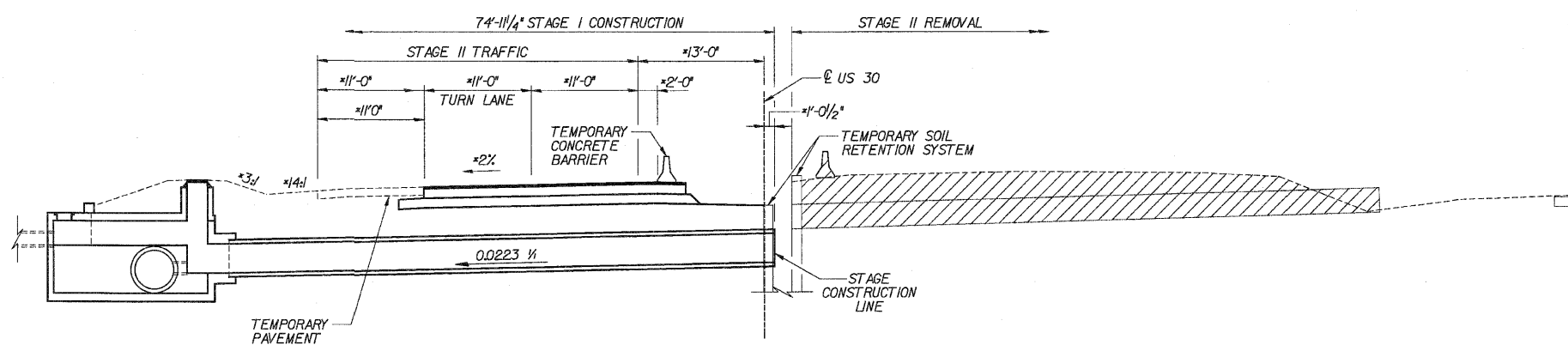


DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

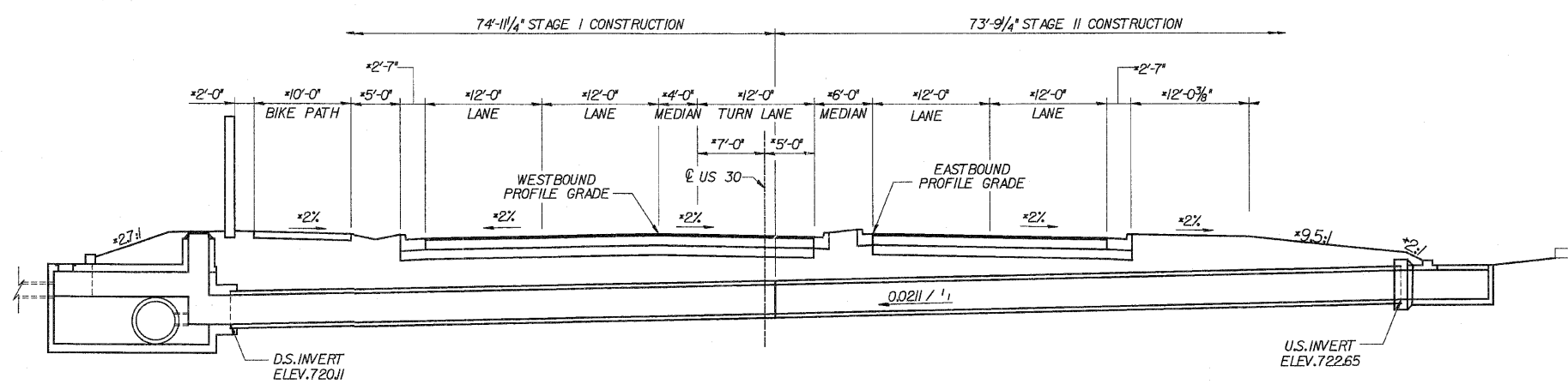
**DLZ** 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005  
 DLZ Illinois, Inc.



**STAGE I**



**STAGE II**



**FINAL CROSS SECTION**

**PROPOSED STAGING NOTES**

- STAGE I REMOVAL AND CONSTRUCTION**
1. MAINTAIN TWO LANES OF TRAFFIC.
  2. INSTALL TEMPORARY CONCRETE BARRIER.
  3. INSTALL STAGE I TEMPORARY SOIL RETENTION SYSTEM.
  4. REMOVE PORTION OF NORTHERN END OF EXISTING STRUCTURE.
  5. CONSTRUCT STAGE I PORTION OF THE STRUCTURE.
  6. INSTALL STAGE II TEMPORARY SOIL RETENTION SYSTEM.
  7. CONSTRUCT ROADWAY PAVEMENT AND TEMPORARY PAVEMENT.
- STAGE II REMOVAL AND CONSTRUCTION**
1. INSTALL TEMPORARY CONCRETE BARRIER.
  2. REMOVE REMAINDER OF EXISTING STRUCTURE.
  3. CONSTRUCT STAGE II PORTION OF THE STRUCTURE.
  4. CONSTRUCT ROADWAY PAVEMENT.

\* MEASURED PERPENDICULAR TO CENTERLINE OF ROADWAY.

**DLZ** 85 W. Algonquin Rd. Ste. 220  
DLZ Illinois, Inc. Arlington Heights IL 60005

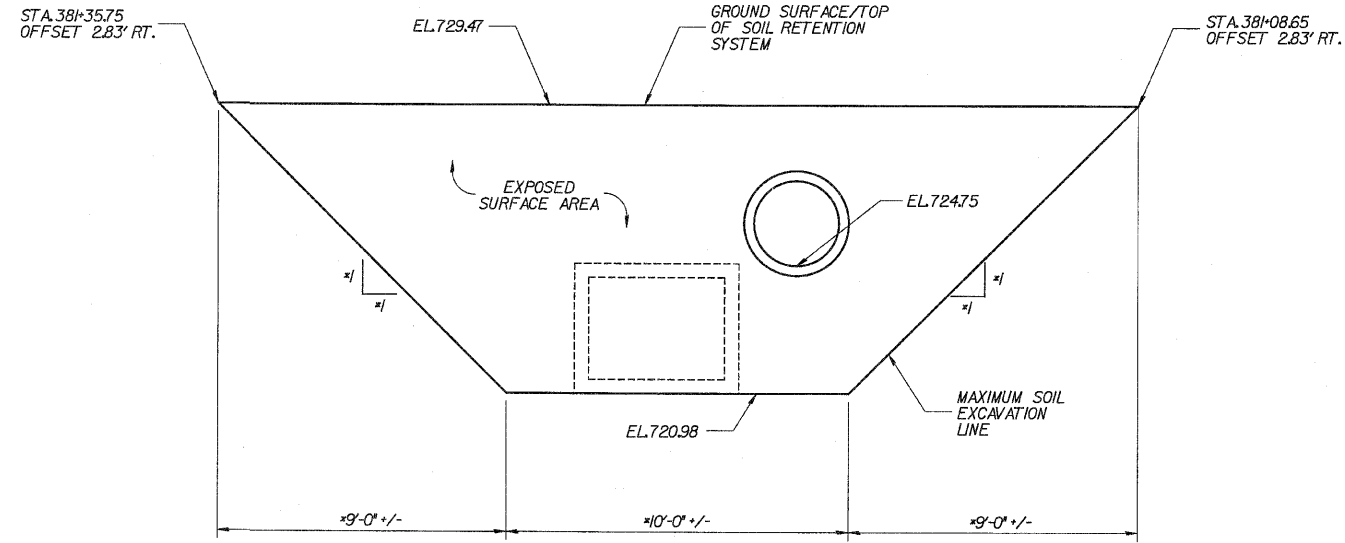
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DRAWN	BGC
CHECKED	ASP

**LEGEND**  
 REMOVAL OF EXISTING STRUCTURES

REVISIONS	
NAME	DATE

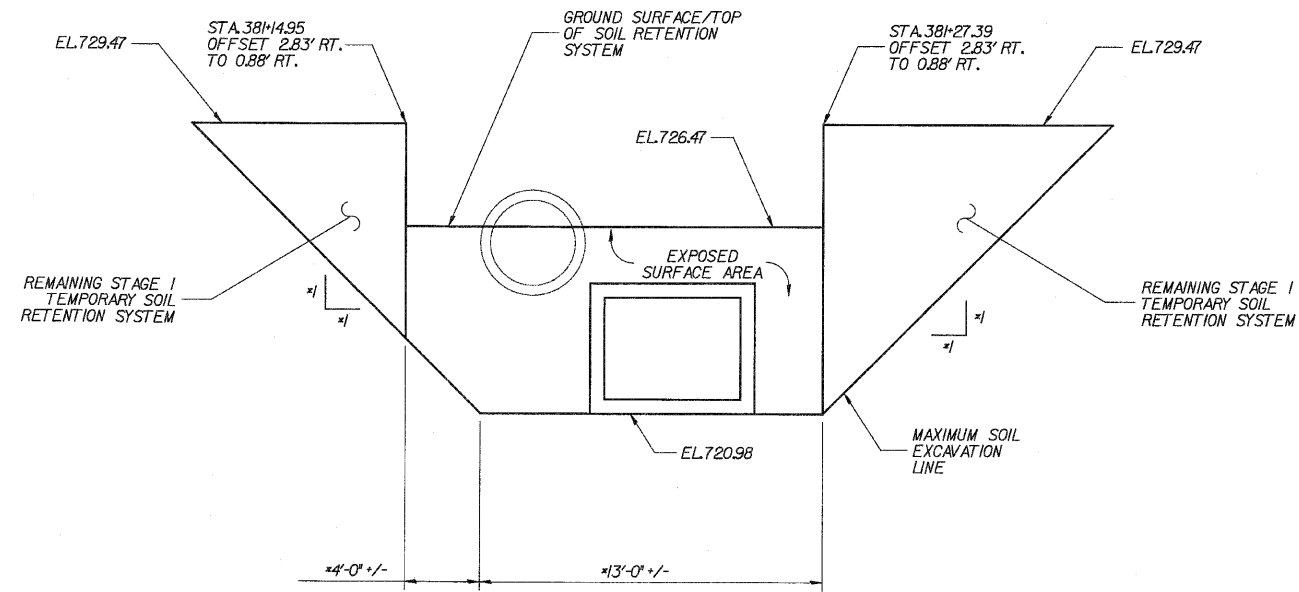
**CULVERT 'K'**  
**PROPOSED STAGE PLANNING**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 381+23.02  
 WILL COUNTY  
 STRUCTURE NUMBER 099-C016

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479



**STAGE I TEMPORARY SOIL RETENTION SYSTEM**

(LOOKING SOUTH)  
\* MEASURED ALONG  $\phi$  OF RETENTION SYSTEM



**STAGE II TEMPORARY SOIL RETENTION SYSTEM**

(LOOKING NORTH)  
\* MEASURED ALONG  $\phi$  OF PILING

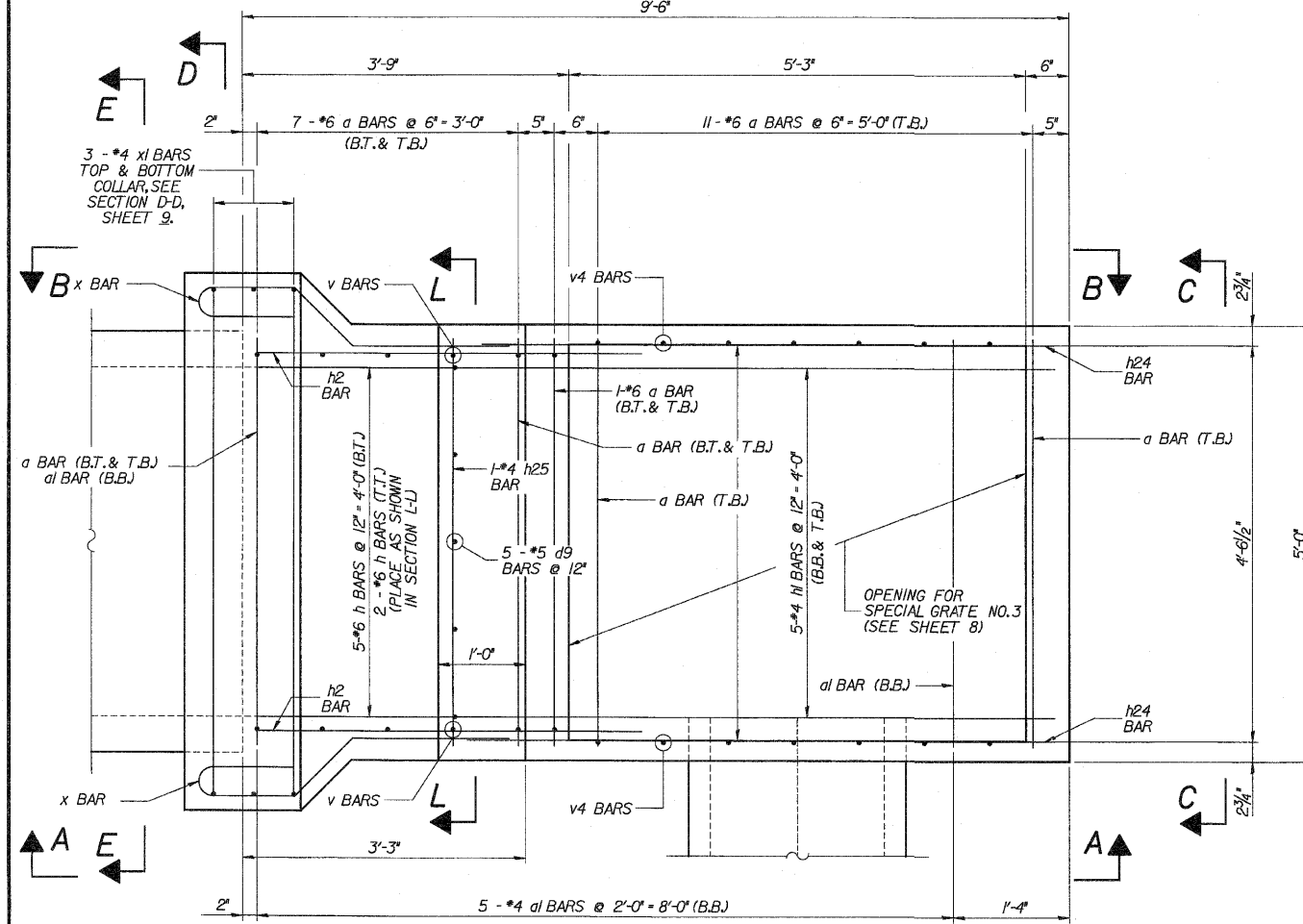
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CHECKED	WSP
DRAWN	BGC
CHECKED	ASP

REVISIONS	
NAME	DATE

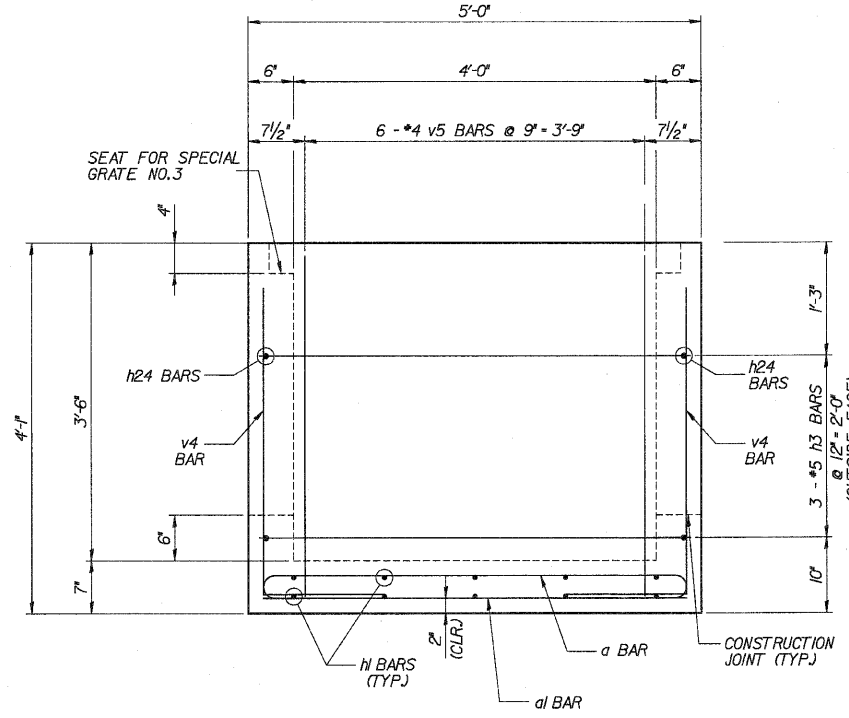
**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**CULVERT 'K'**  
**TEMPORARY SOIL RETENTION SYSTEM**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

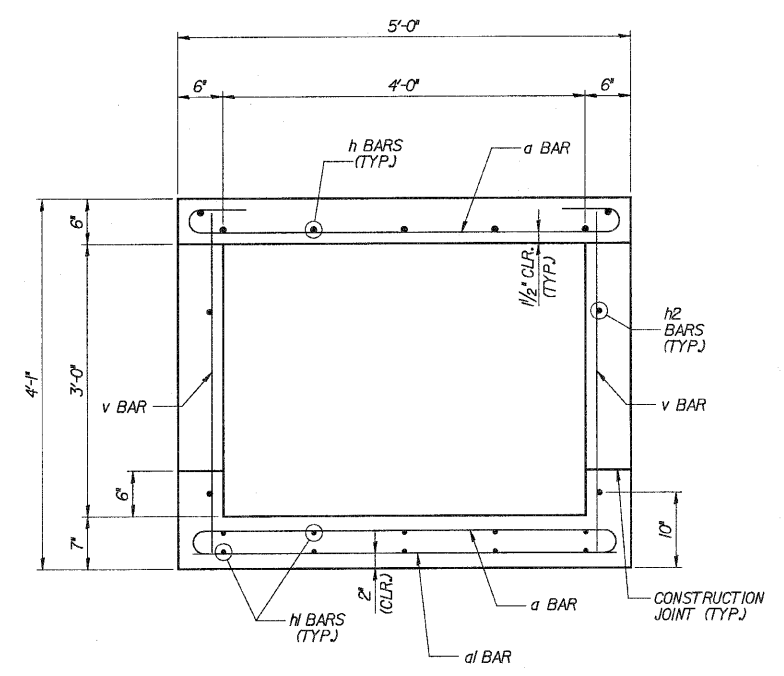
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1,235	707
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* SECT. (12 & 13) WRS-3				
* CONTRACT NO. 62479				



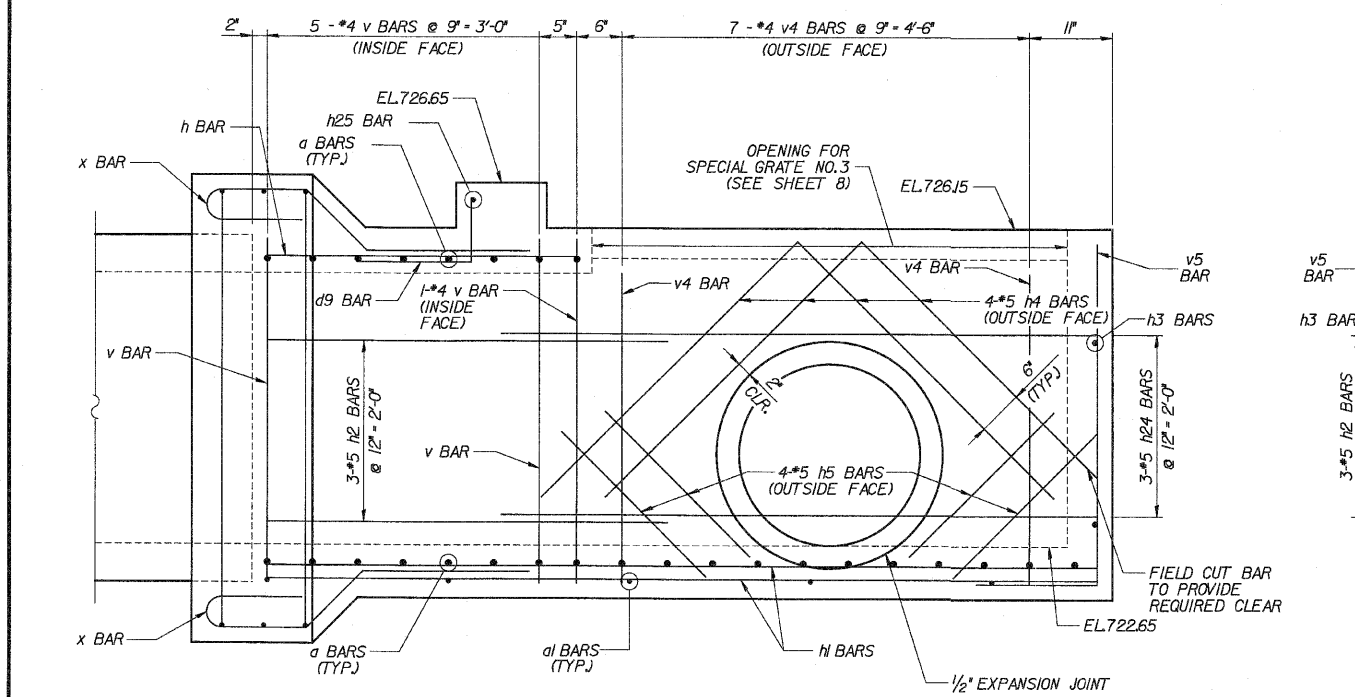
PLAN



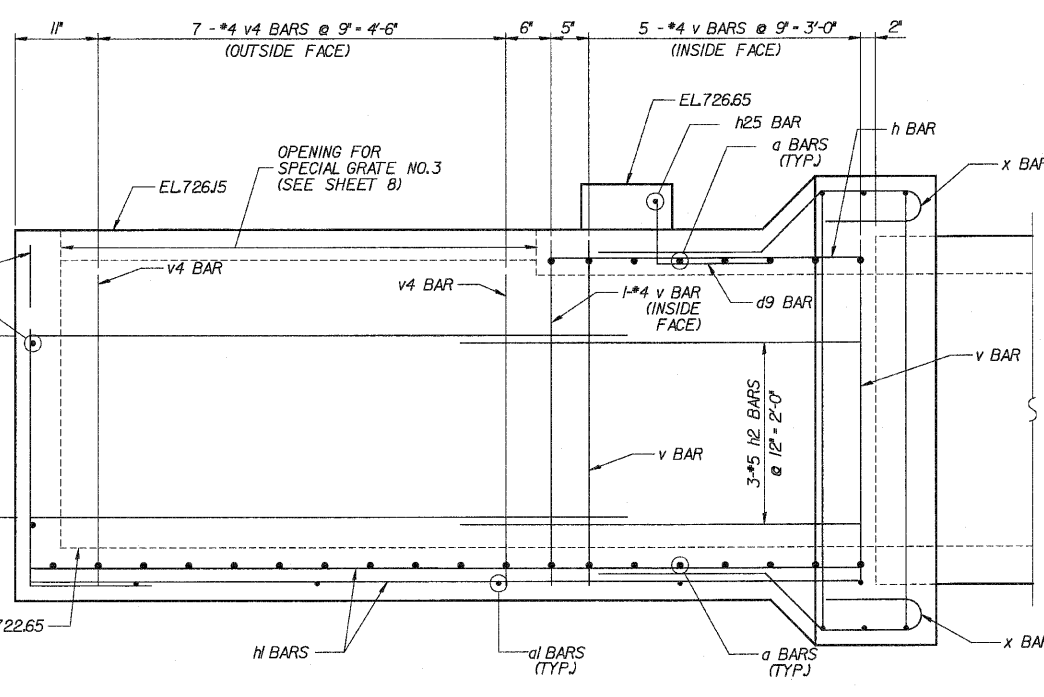
VIEW C-C



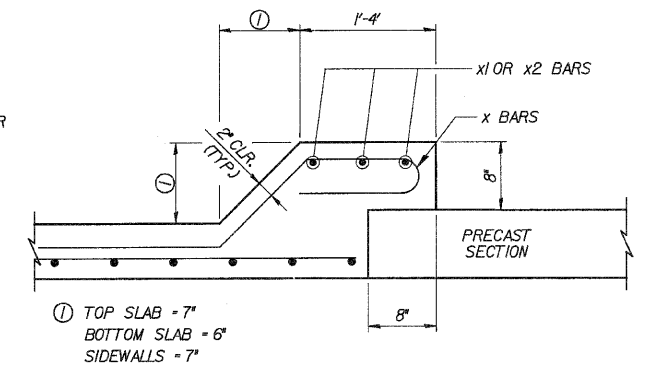
SECTION L-L



VIEW A-A



VIEW B-B



PRECAST TO CAST-IN-PLACE  
CONNECTION COLLAR

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

NOTE:  
FIELD CUT #4, #4, & #24 BARS TO  
FIT AROUND OPENING FOR PIPE.

LEGEND

T.T. - TOP OF TOP SLAB  
B.T. - BOTTOM OF TOP SLAB  
T.B. - TOP OF BOTTOM SLAB  
B.B. - BOTTOM OF BOTTOM SLAB

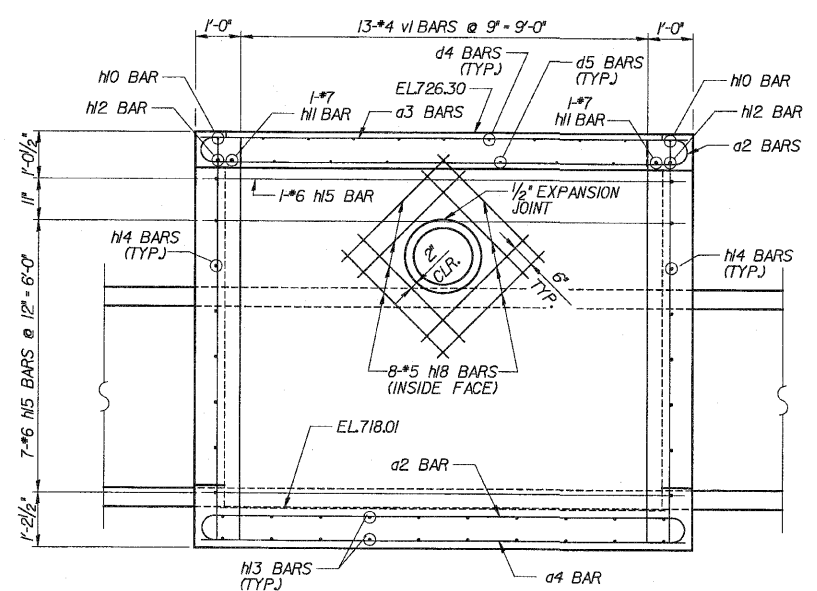


85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

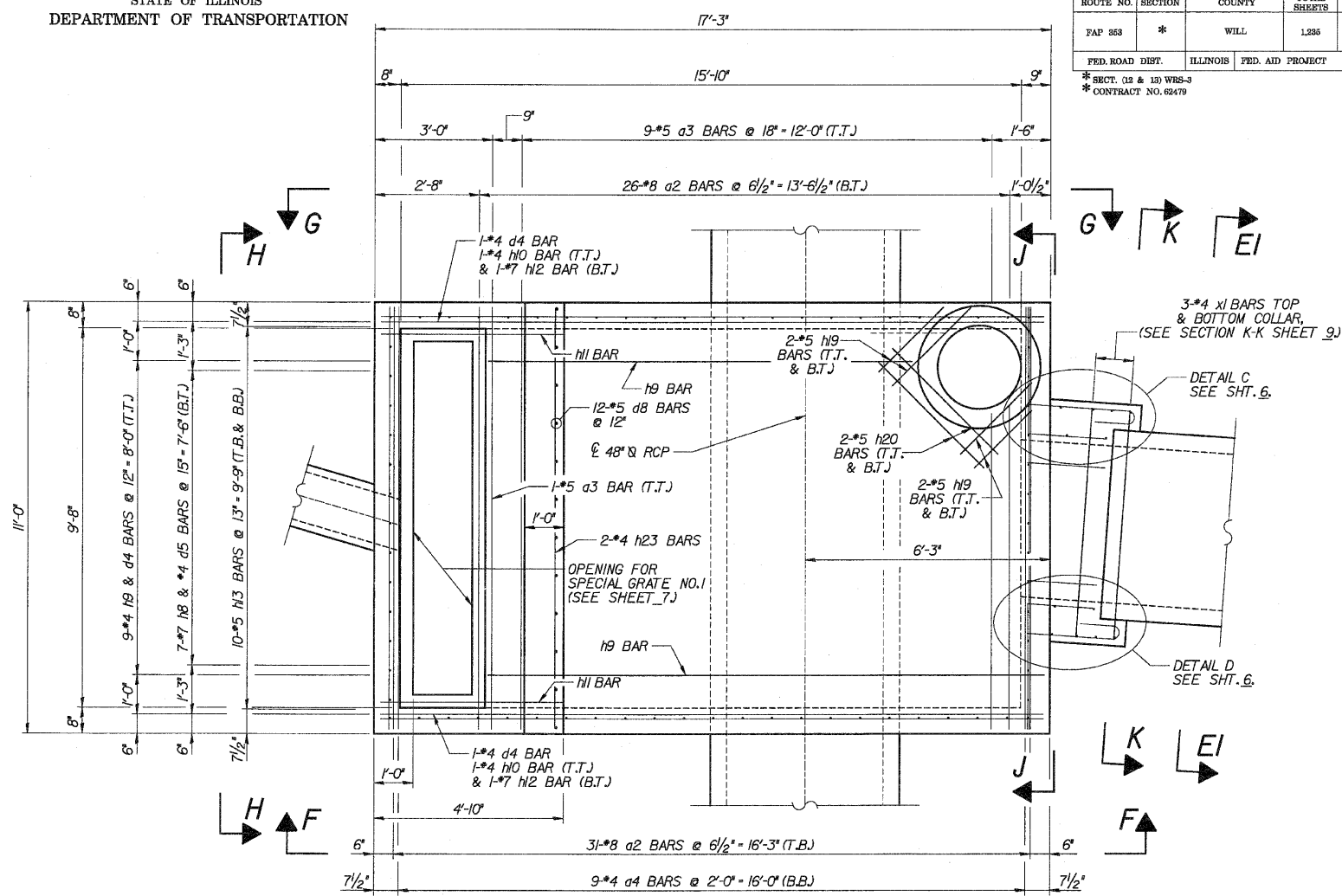
REVISIONS	
NAME	DATE

**CULVERT 'K'**  
**INLET PLAN & ELEVATION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

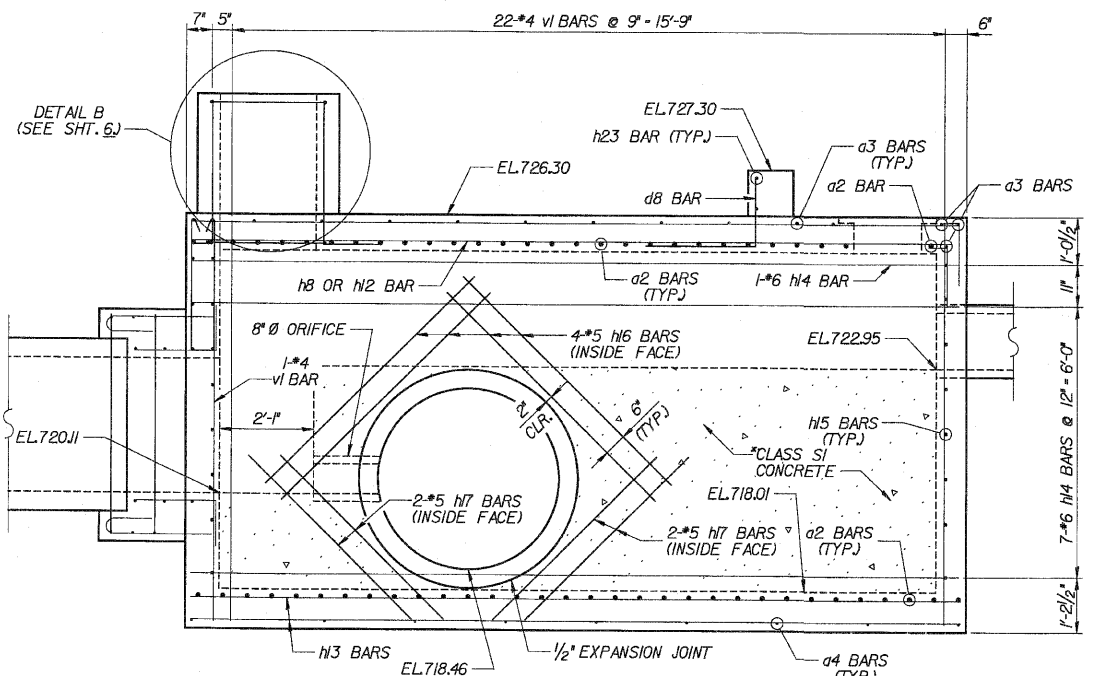
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1,285	706
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* SECT. 12 & 13 WRS-3 * CONTRACT NO. 62479				



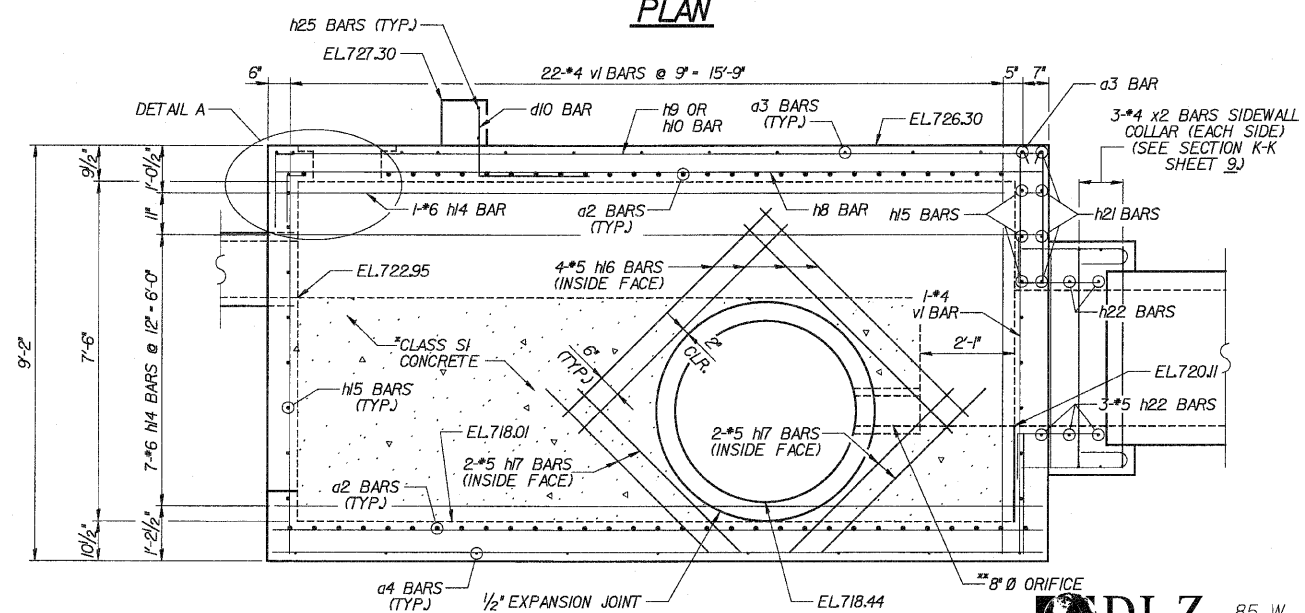
VIEW H-H



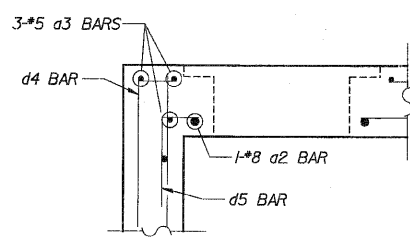
PLAN



VIEW G-G



VIEW F-F



DETAIL A

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

**LEGEND**  
T.T. - TOP OF TOP SLAB  
B.T. - BOTTOM OF TOP SLAB  
T.B. - TOP OF BOTTOM SLAB  
B.B. - BOTTOM OF BOTTOM SLAB

\* COST OF CLASS SI CONCRETE SHALL BE INCLUDED IN THE COST OF CONCRETE BOX CULVERTS.  
NOTE: FIELD CUT #8, #9, #10, #14, #15, #2, #3 & #6 BARS TO FIT AROUND OPENING FOR PIPE AND FRAME & LIDS, WHEN NECESSARY.  
BACKFILLING OPERATIONS AROUND CHAMBER SHALL BE COMPLETED PRIOR TO PLACEMENT OF CLASS SI CONCRETE INSIDE CHAMBER.

NOTE: FIELD CUT #8, #9, #10, #14, #15, #2, #3 & #6 BARS TO FIT AROUND OPENING FOR PIPE AND FRAME & LIDS, WHEN NECESSARY.  
BACKFILLING OPERATIONS AROUND CHAMBER SHALL BE COMPLETED PRIOR TO PLACEMENT OF CLASS SI CONCRETE INSIDE CHAMBER.

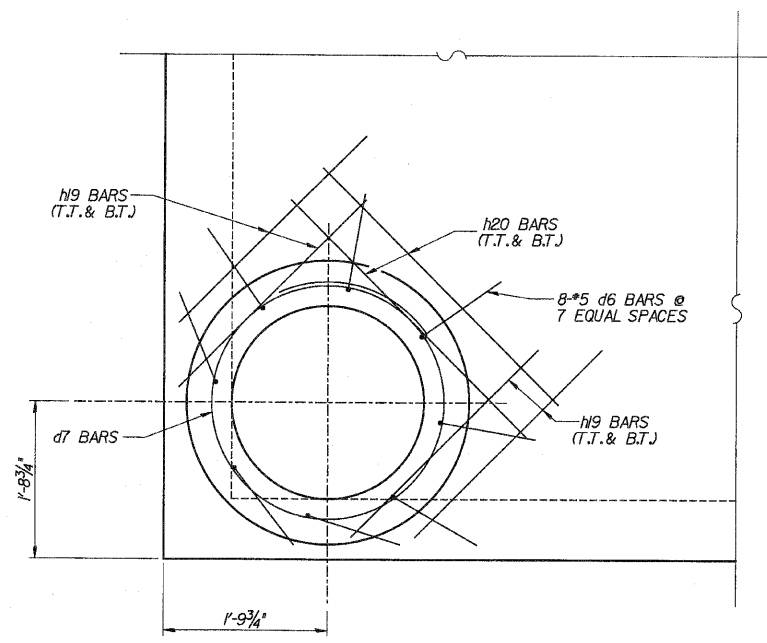
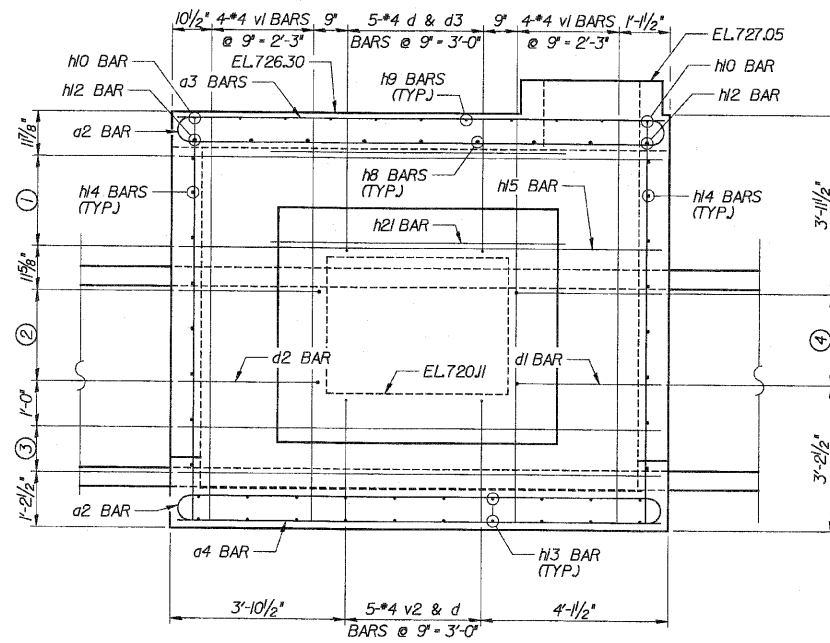
REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**CULVERT 'K'**  
**OUTLET PLAN & ELEVATION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

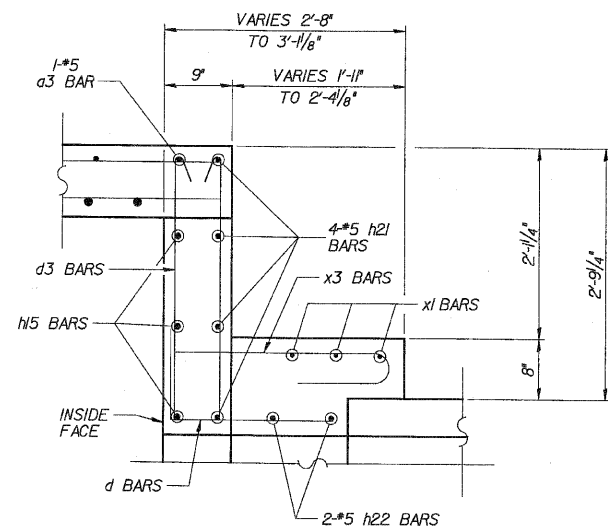


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1,385	709
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* SECT. 12 & 13 WRS-3 * CONTRACT NO. 62479				

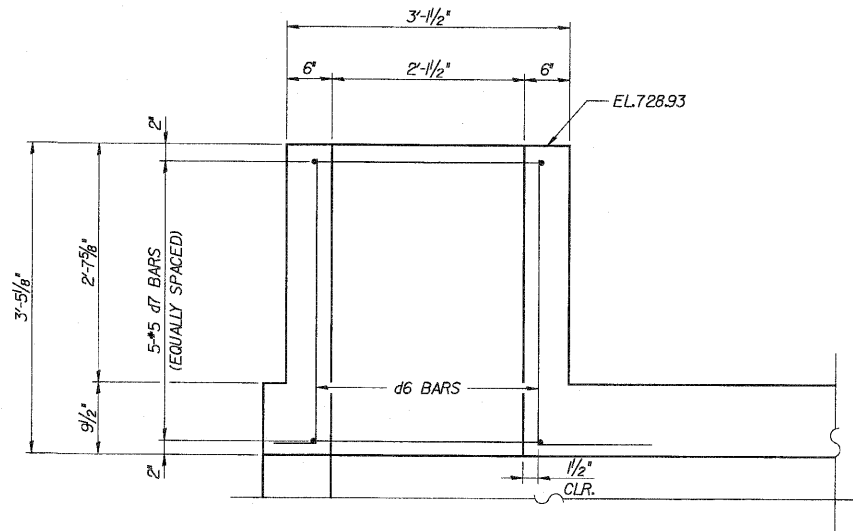


- ① 3 #6 N5 BARS @ 12\" - 2'-0\" (INSIDE FACE)
- ② 3 #6 d2 BARS @ 12\" - 2'-0\"
- ③ 2 #6 N5 BARS @ 12\" - 1'-0\"
- ④ 3 #6 d1 BARS @ 12\" - 2'-0\"

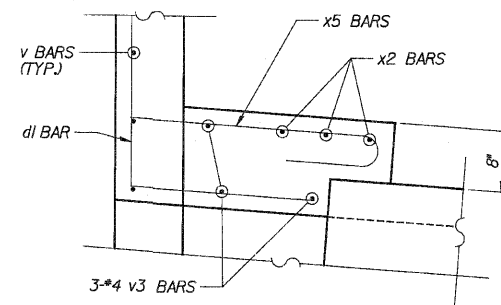
**VIEW J-J**



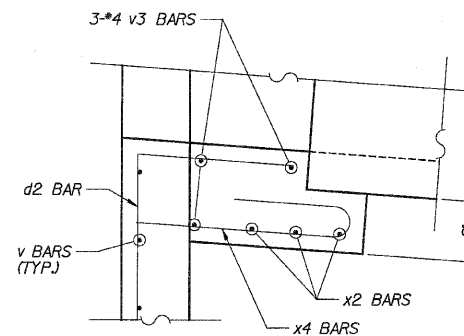
**OUTLET PRECAST TO CAST-IN-PLACE CONNECTION COLLAR**



**DETAIL B**



**DETAIL C**



**DETAIL D**

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

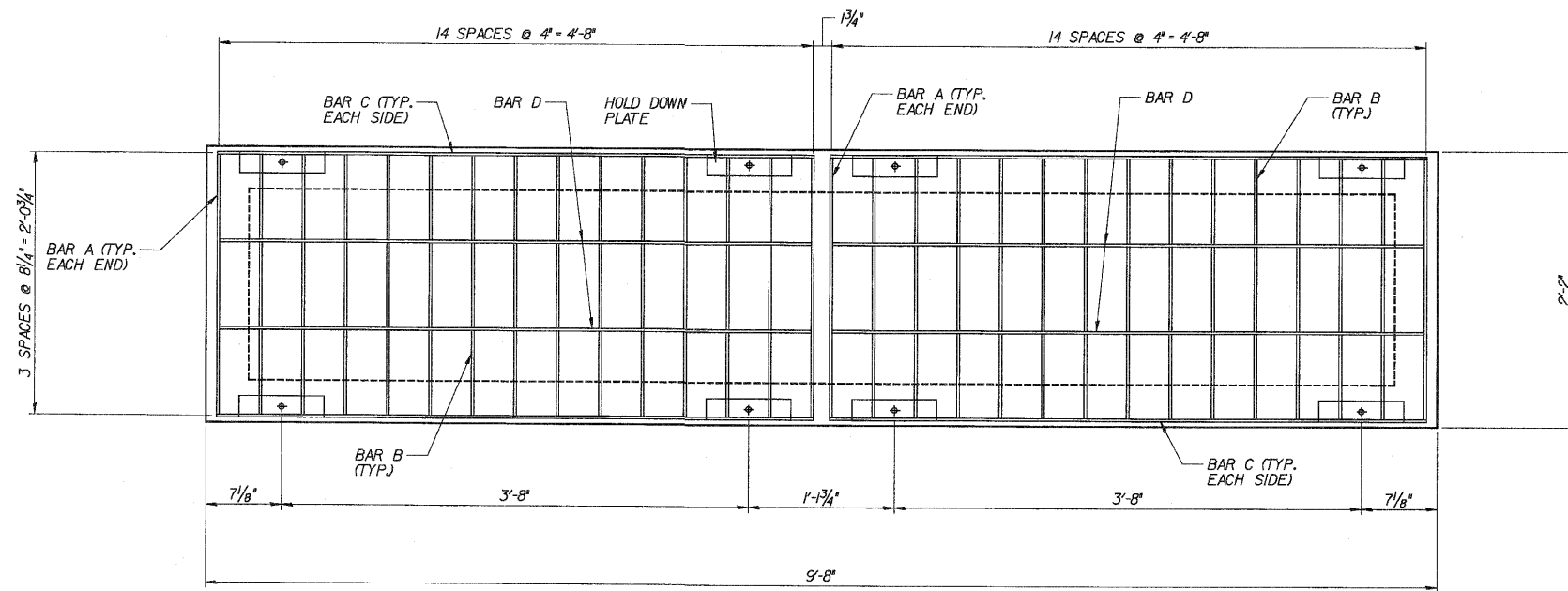
REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

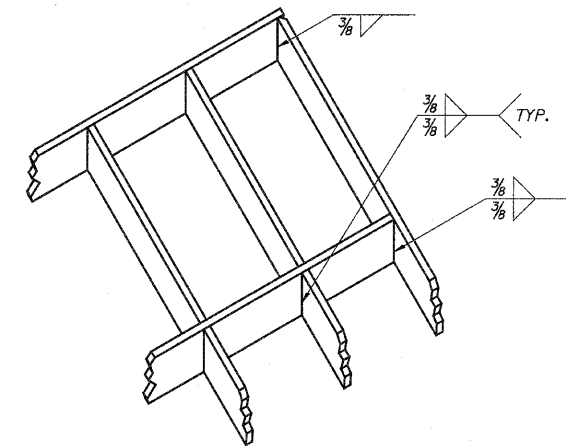
**CULVERT 'K'  
OUTLET DETAILS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1,385	710
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

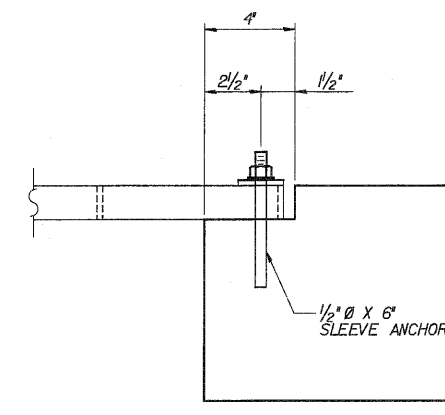
\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 82479



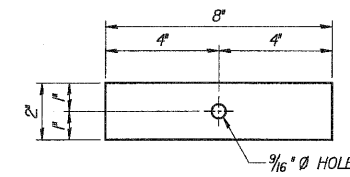
**FRAME AND GRATE PLAN**



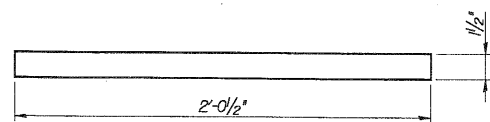
**ISOMETRIC VIEW OF FRAME AND GRATE**



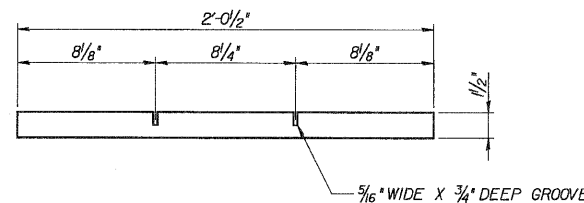
**SLEEVE ANCHOR**  
1/2" DIA X 6"  
(4-EA. GRATE, 8 TOTAL)



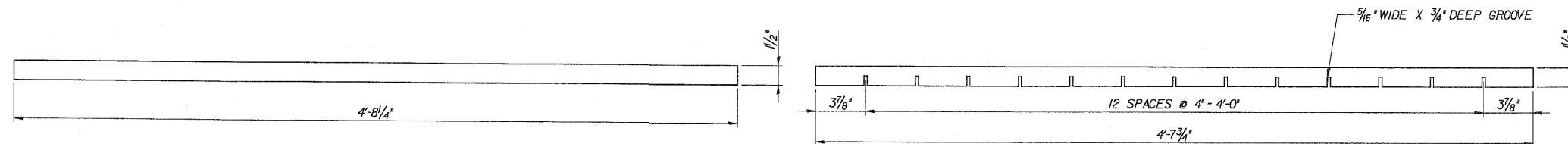
**HOLD DOWN PLATE**  
8" x 2" x 1/4"  
(4-EA. GRATE, 8 TOTAL)



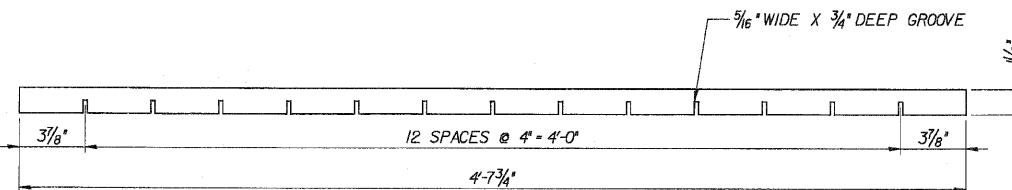
**BAR A**  
2'-0 1/2" x 1/2" x 1/4"  
(2-EA. GRATE, 4 TOTAL)



**BAR B**  
2'-0 1/2" x 1/2" x 1/4"  
(13-EA. GRATE, 26 TOTAL)



**BAR C**  
4'-8 1/4" x 1/2" x 1/4"  
(2-EA. GRATE, 4 TOTAL)



**BAR D**  
4'-7 3/4" x 1/2" x 1/4"  
(2-EA. GRATE, 4 TOTAL)

**NOTES**

- FABRICATOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION
- ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M111.
- ALL STRUCTURAL STEEL SHALL BE A36 STEEL, Fy=36,000psi. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 505 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- FIELD WELDING IS PROHIBITED. ALL WELDING AND WELDING MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT AMERICAN WELDING SOCIETY (AWS) SPECIFICATIONS.
- SEE SPECIAL PROVISION FOR "SPECIAL GRATE NO.1"
- IF FABRICATOR CHOOSES TO ALTER GRATE DESIGN, SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

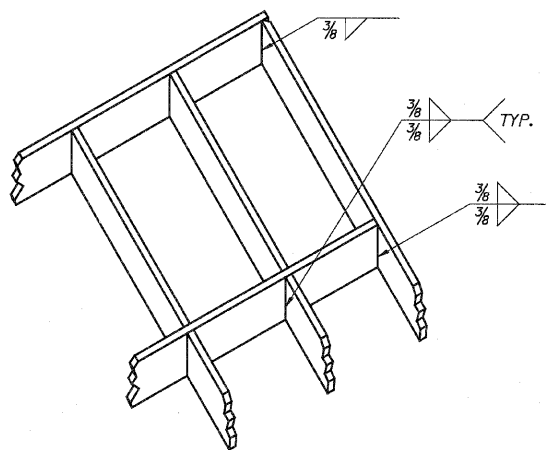
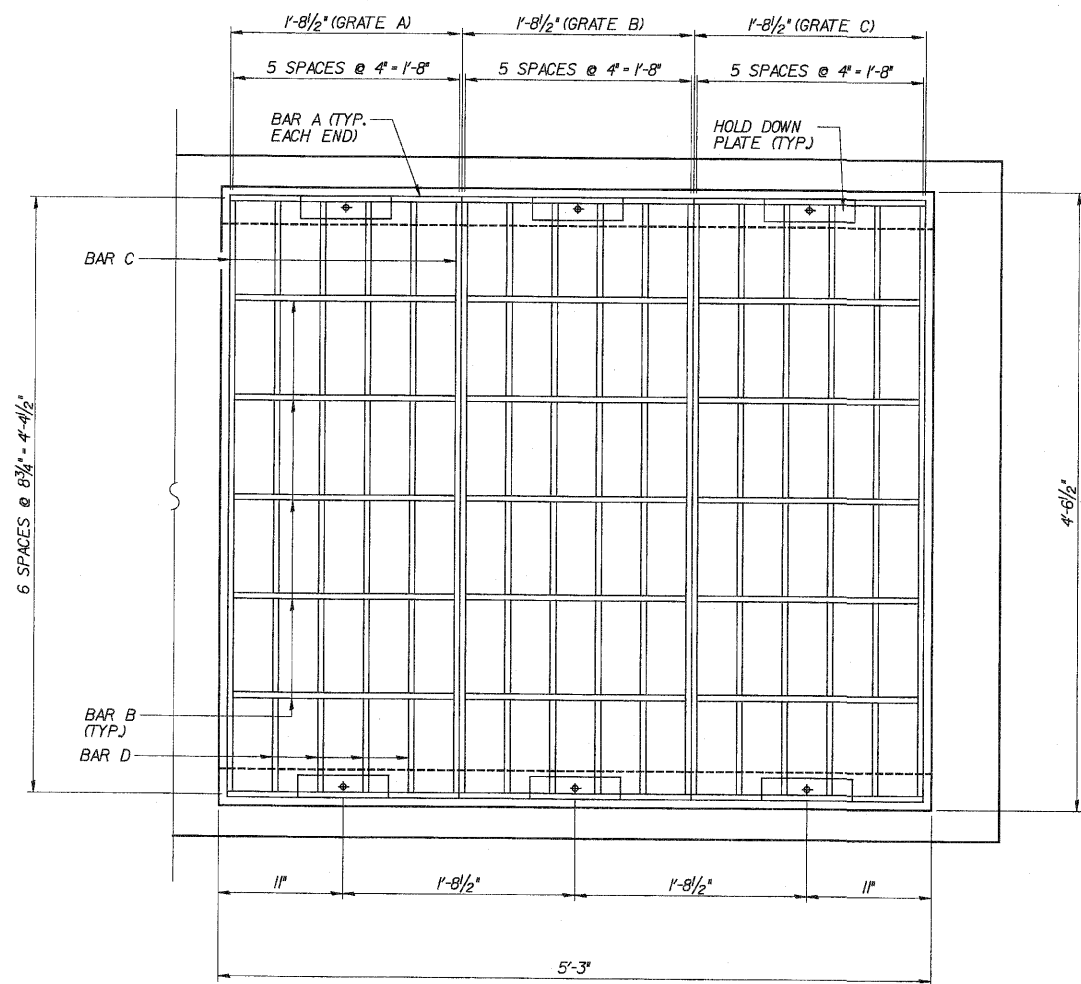
REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

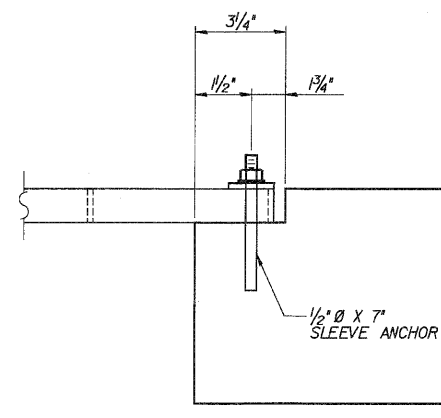
**CULVERT 'K'**  
**SPECIAL GRATE NO.1**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1,236	718A
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

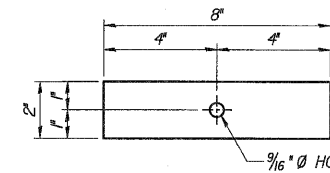
\* SBC. (12 & 13) WRS-3  
\* CONTRACT NO. 62475



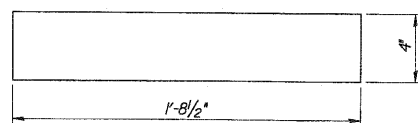
ISOMETRIC VIEW OF  
FRAME AND GRATE



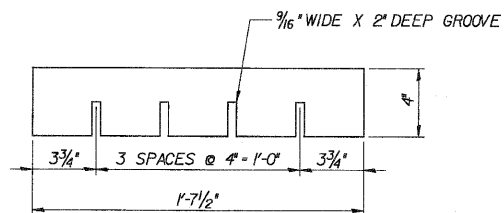
SLEEVE ANCHOR  
1/2" Ø X 7"  
(2-EA. GRATE, 6 TOTAL)



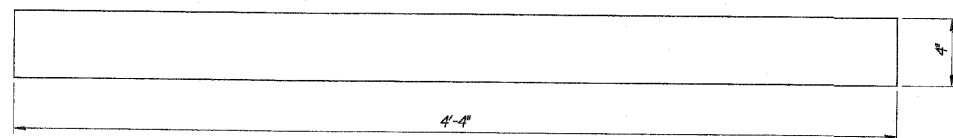
HOLD DOWN PLATE  
8" X 2" X 1/4"  
(2-EA. GRATE, 6 TOTAL)



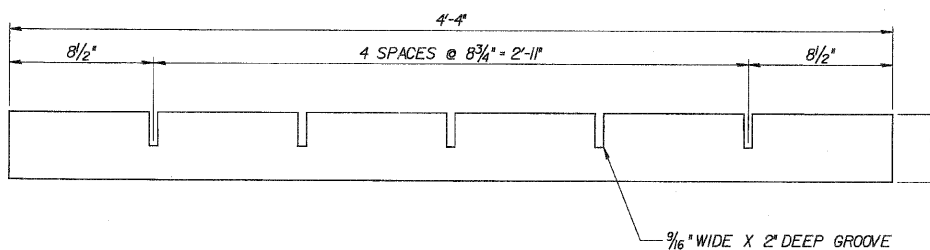
BAR A  
1'-8 1/2" X 4" X 1/2"  
(2-EA. GRATE, 6 TOTAL)



BAR B  
1'-7 1/2" X 4" X 1/2"  
(5-EA. GRATE, 15 TOTAL)



BAR C  
4'-4" X 4" X 1/2"  
(2-EA. GRATE, 6 TOTAL)



BAR D  
4'-4" X 4" X 1/2"  
(4-EA. GRATE, 12 TOTAL)

NOTES

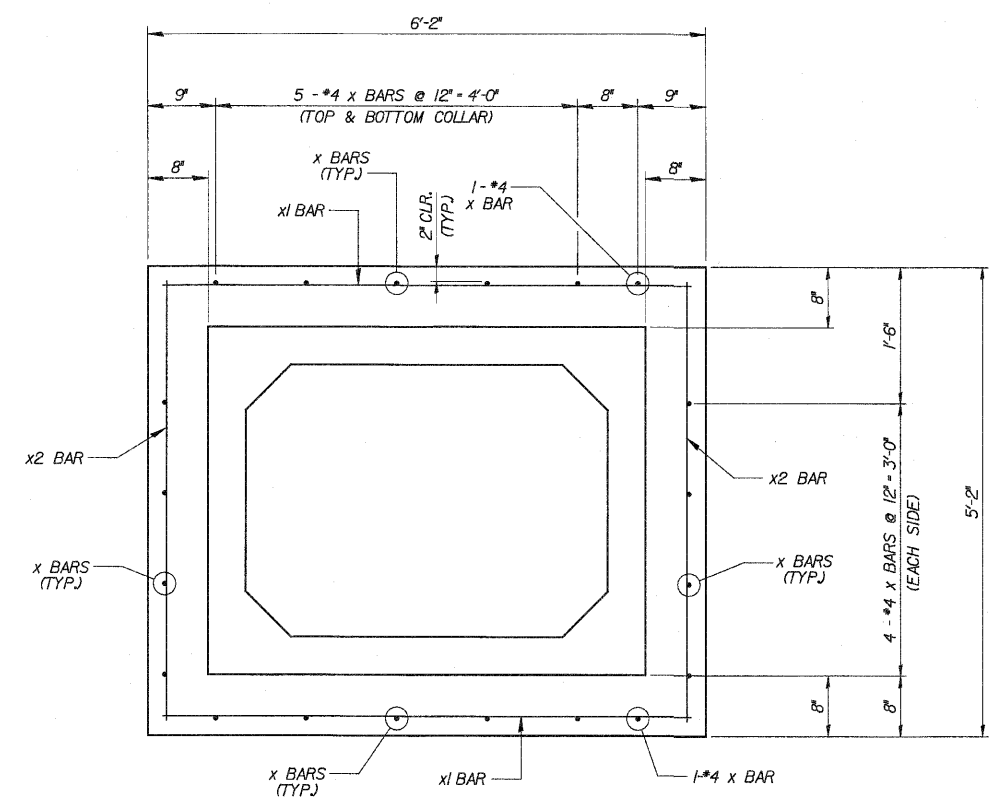
- FABRICATOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION
- ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M111.
- ALL STRUCTURAL STEEL SHALL BE A36 STEEL, F<sub>y</sub>=36,000psi. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 505 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- FIELD WELDING IS PROHIBITED. ALL WELDING AND WELDING MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT AMERICAN WELDING SOCIETY (AWS) SPECIFICATIONS.
- SEE SPECIAL PROVISION FOR "SPECIAL GRATE NO.3"
- IF FABRICATOR CHOOSES TO ALTER GRATE DESIGN, SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

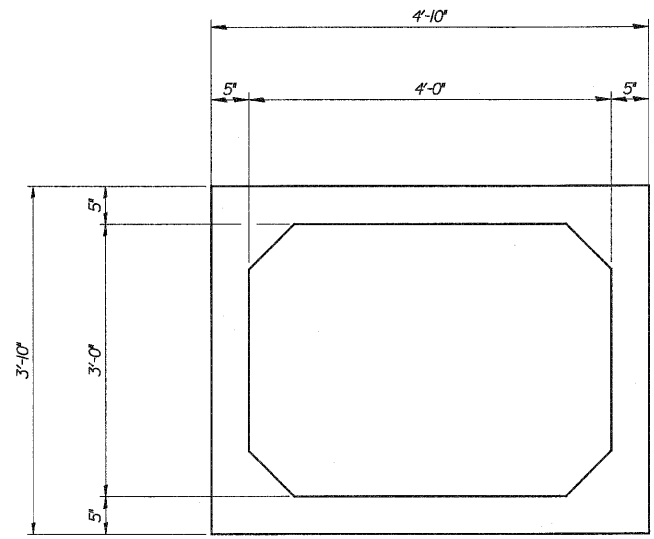
DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

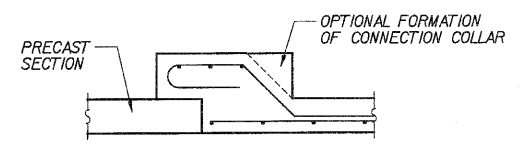
**CULVERT 'K'**  
**SPECIAL GRATE NO.3**  
U.S.ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P.353 (U.S.30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016



**SECTION D-D**

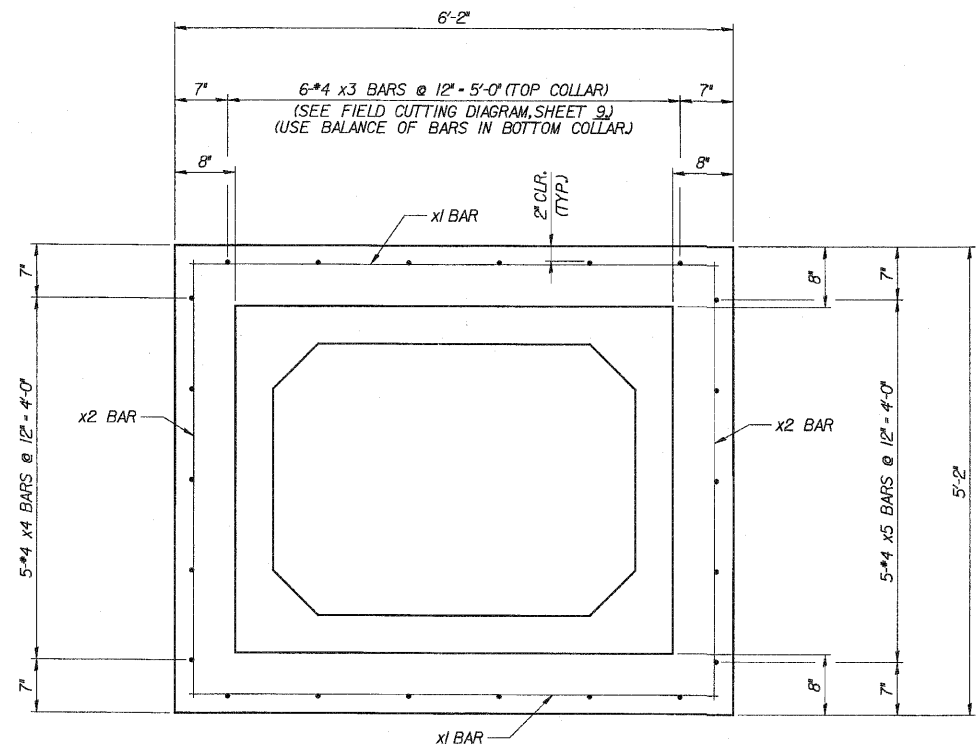


**SECTION E-E & E-I-EI**

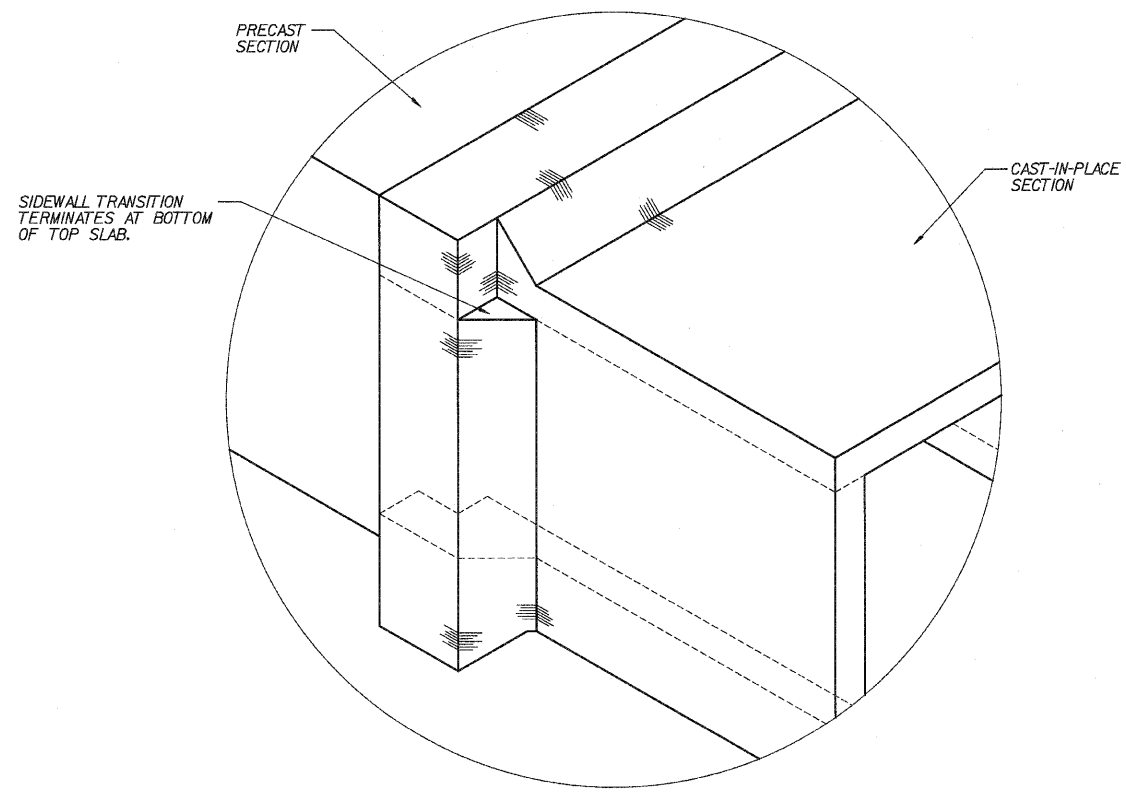


**OPTIONAL PRECAST TO CAST-IN-PLACE CONNECTION COLLAR**

NOTE:  
ADDITIONAL CONCRETE USED FOR THE  
OPTIONAL COLLAR FORMATION WILL BE  
PROVIDED AT THE CONTRACTOR'S EXPENSE.



**SECTION K-K**



**ISOMETRIC VIEW OF CONNECTION COLLAR**

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

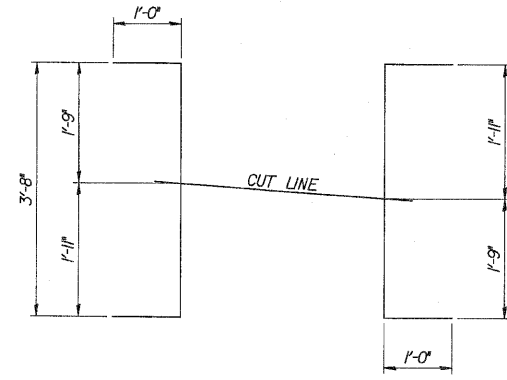
REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

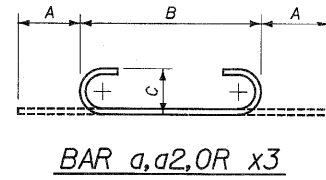
**CULVERT 'K'**  
**TYPICAL SECTIONS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

**BILL OF MATERIAL**

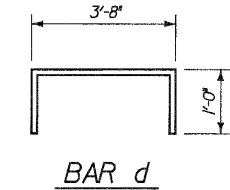
Bar	No.	Size	Length	Shape
a	27	6	6'-0"	
a1	5	4	4'-8"	
a2	58	8	12'-6"	
a3	14	5	10'-8"	
a4	9	4	10'-8"	
d	5	4	5'-8"	
d1	3	6	5'-2"	
d2	3	6	4'-10"	
d3	5	4	7'-2"	
d4	11	4	2'-4"	
d5	7	4	1'-5"	
d6	8	5	4'-4"	
d7	5	5	9'-3"	
d8	12	5	3'-8"	
d9	5	5	1'-11"	
h	7	6	3'-5"	
h1	10	4	9'-2"	
h2	6	5	4'-5"	
h3	3	5	4'-8"	
h4	4	5	4'-0"	
h5	4	5	2'-3"	
h6	4	5	3'-0"	
h7	4	5	2'-3"	
h8	7	7	14'-5"	
h9	9	4	14'-1"	
h10	2	4	16'-11"	
h11	2	7	4'-8"	
h12	2	7	16'-11"	
h13	20	5	16'-11"	
h14	16	6	16'-11"	
h15	13	6	10'-8"	
h16	8	5	6'-6"	
h17	8	5	4'-11"	
h18	8	5	3'-4"	
h19	8	5	2'-4"	
h20	4	5	4'-10"	
h21	4	5	6'-7"	
h22	5	5	5'-10"	
h23	2	4	10'-8"	
h24	6	5	6'-7"	
h25	1	4	4'-8"	
v	16	4	3'-9"	
v1	67	4	8'-10"	
v2	5	4	2'-8"	
v3	6	4	4'-10"	
v4	14	4	4'-9"	
v5	6	4	5'-1"	
x	20	4	5'-1"	
x1	12	4	5'-10"	
x2	12	4	4'-10"	
x3	6	4	7'-6"	
x4	5	4	3'-7"	
x5	5	4	4'-0"	
CONCRETE BOX CULVERTS			CU. YD.	25.3
REINFORCEMENT BARS			POUND	5,240



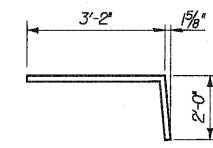
**BAR d**  
5 BARS-1 SET



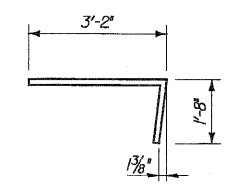
**BAR a, a2, OR x3**



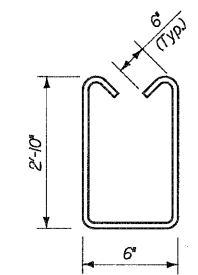
**BAR d**



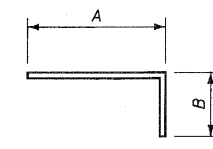
**BAR d1**



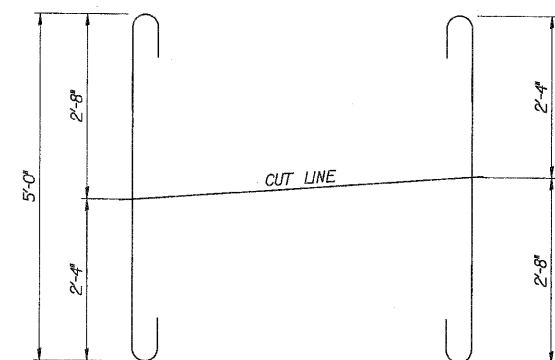
**BAR d2**



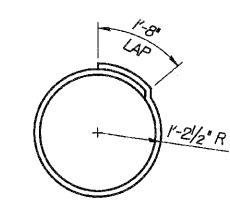
**BAR d3**



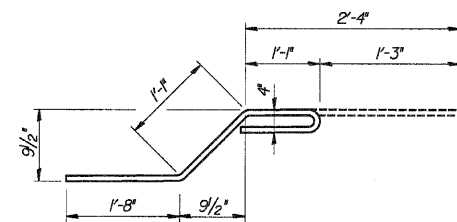
**BARS d4 THRU d6, d8, d9, v4 OR v5**



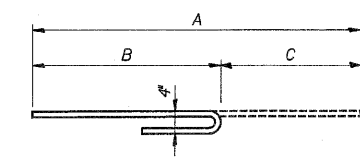
**BARS x3**  
6 BARS-1 SET



**BARS d7**



**BAR x**



**BARS x4 OR x5**

**BAR BENDING DIAGRAMS**

Bar	A		B		C	
	Ft.	In.	Ft.	In.	Ft.	In.
a	0	8	4	8	0	6
a2	0	11	10	8	0	8
d4	1	8	0	8		
d5	1	0	0	5		
d6	3	1	1	3		
d8	2	5	1	3		
d9	1	3	0	8		
v4	3	5	1	4		
v5	3	9	1	4		
x3	1	3	5	0	0	4
x4	3	7	2	4	1	3
x5	4	0	2	9	1	3

**BAR CUTTING DIAGRAMS**

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**CULVERT 'K'**  
**BARBILL & DETAILS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 38+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 02479

**BORING LOG BS-093**

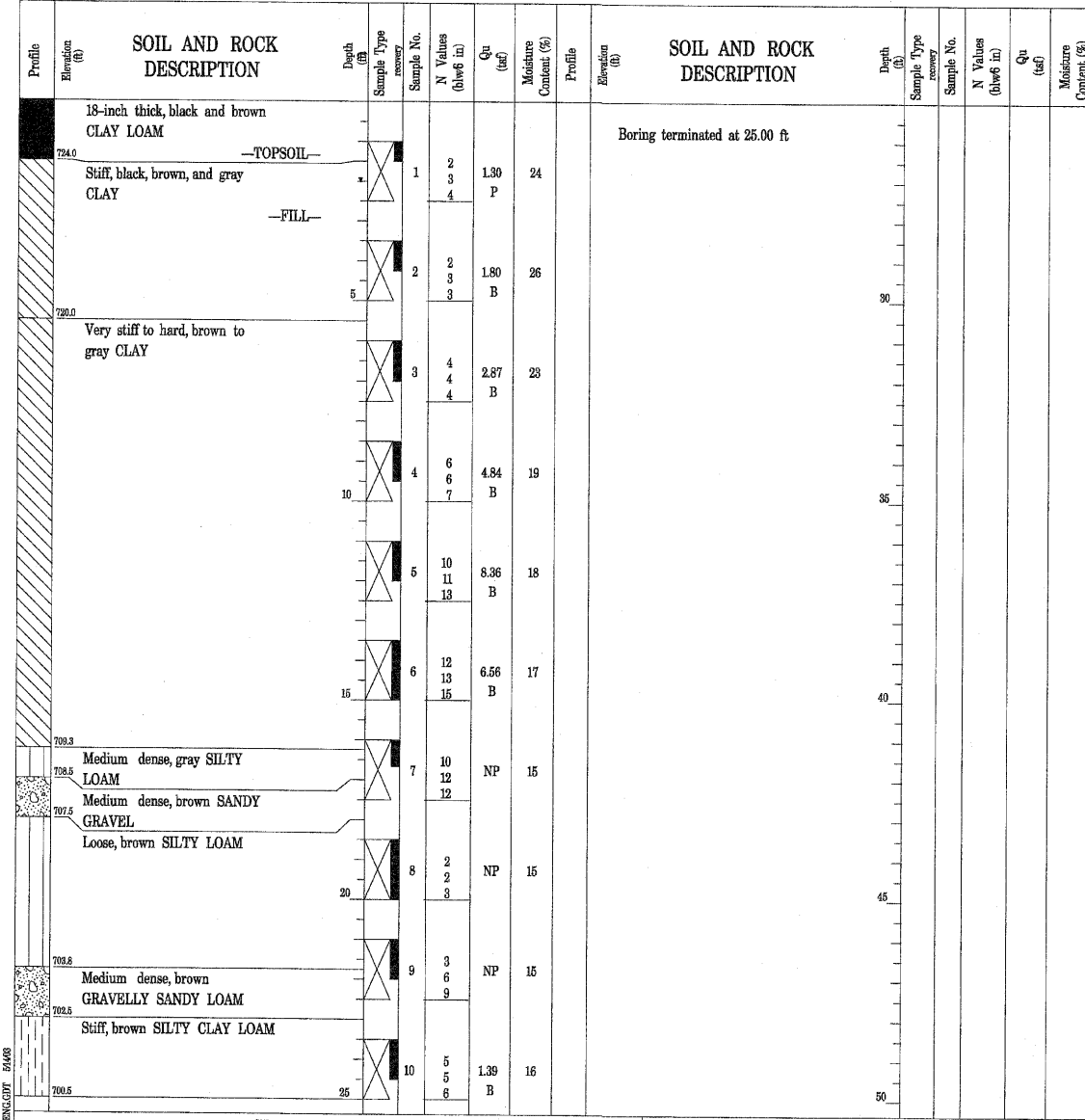
Page 1 of 1

<p>Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers wangeng3@wangeng.com 100 Fairbank Street Addison, IL 60101 Telephone: 630 458-0700 Fax: 630 458-0900</p>	<p>WEI Job No.: 301-01-01</p> <p>Client <u>Brighton Engineering Company</u></p> <p>Project <u>GEOT - US. 30, Will Co, IL, IDOT D-91-219-02</u></p> <p>Location <u>T35N, R11E, Sec 22-24, R12E, Sec 19-21</u></p>	<p>Datum: NGVD Elevation: 725.52 ft North: 1763136.50 ft East: 1113213.44 ft Station: 381+24.45 Offset: 56.06 LT</p>
--	--	--

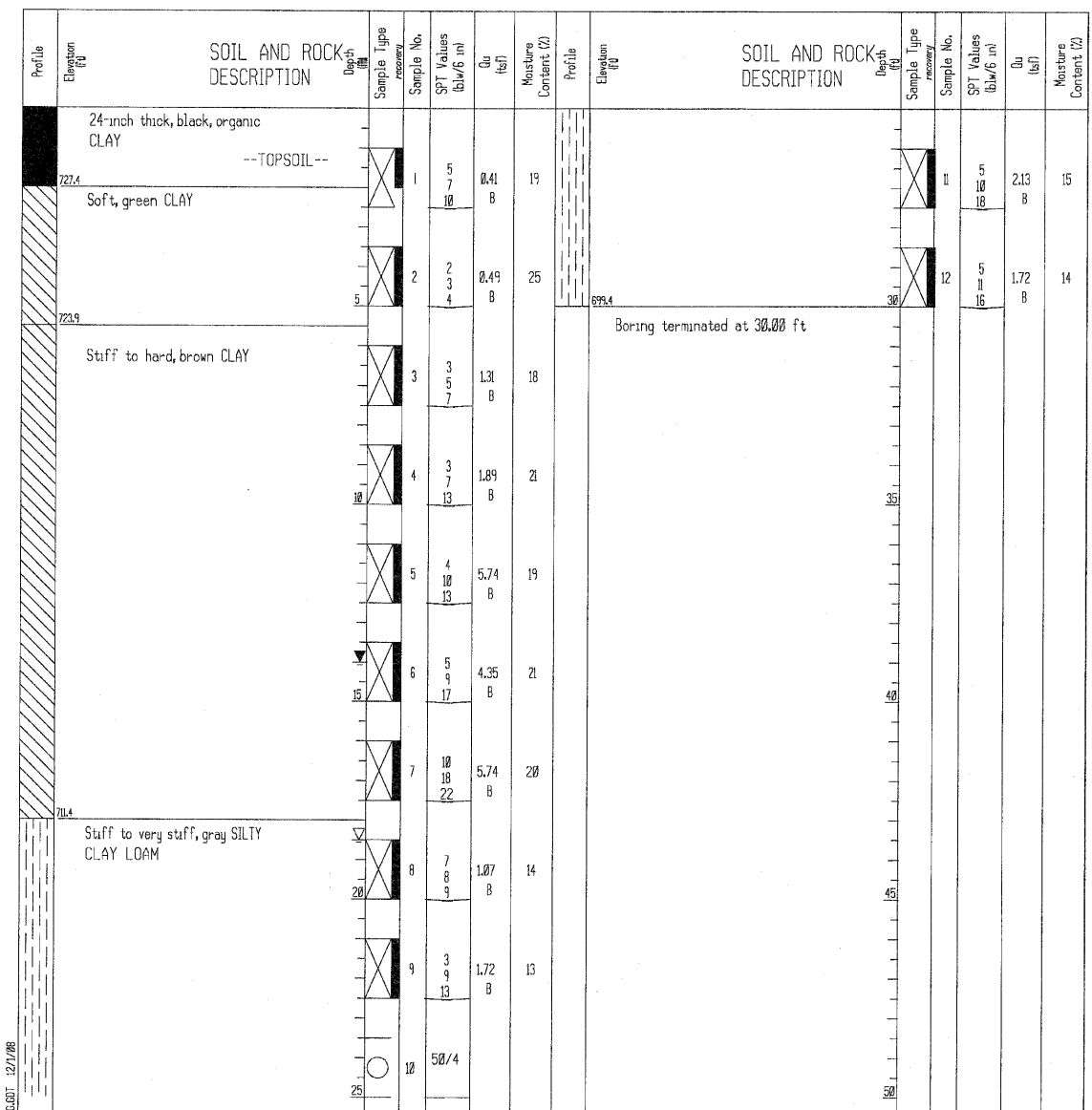
**BORING LOG BS-121**

Page 1 of 1

<p>Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers wangeng3@wangeng.com 1145 N. Main Street Lombard, IL 60148 Telephone: (630) 953-9928 Fax: (630) 953-9938</p>	<p>WEI Job No.: 301-01-02</p> <p>Client <u>DLZ - Brighton Engineering, Inc.</u></p> <p>Project <u>GEOT - US. 30, Will Co, IL, IDOT D-91-219-02</u></p> <p>Location <u>T35N, R11E, Sec 22-24, R12E, Sec 19-21</u></p>	<p>Datum: NGVD Elevation: 723.37 ft North: 1763077.73 ft East: 1113187.18 ft Station: 381+20.00 Offset: 0</p>
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GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-19-2003	Complete Drilling	03-19-2003
Drilling Contractor	TSC	Drill Rig	CME 550 ATV
Driller	C&J	Logger	J. Kasnick
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Checked by	S. Janowski
		Time After Drilling	NA
		Depth to Water	NA
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-20-2005	Complete Drilling	04-20-2005
Drilling Contractor	DLZ	Drill Rig	D-120 TMR
Driller	K&R	Logger	B. Panozzo
Drilling Method	3.25" ID HSA; Boring backfilled upon completion	Checked by	S. Janowski
		Time After Drilling	NA
		Depth to Water	NA
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

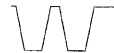
DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**CULVERT 'K'**  
**BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 381+23.02  
WILL COUNTY  
STRUCTURE NUMBER 099-C016

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479


 Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers wangeng@wangeng.com 1145 N. Main Street Lombard, IL 60148 Telephone: (630) 953-9928 Fax: (630) 953-9938	<b>BORING LOG BS-122</b> WEI Job No.: 301-01-02		Page 1 of 1
	Client	DLZ - Brighton Engineering, Inc.	
	Project	GEOT - US. 30, Will Co, IL, IDOT D-91-219-02	
	Location	T35N, R11E, Sec 22-24, R12E, Sec 19-21	
		Datum: NGVD	
		Elevation: 730.00 ft	
		North: 1763029.82 ft	
		East: 1113242.35 ft	
		Station: 381+20.00	
		Offset: 68.00	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	G <sub>s</sub> (pcf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	G <sub>s</sub> (pcf)	Moisture Content (%)
724.5	Soft to medium stiff, green CLAY	0.50	P	5710	0.50	22		720.0	Boring terminated at 30.00 ft						
		2.33	B	445	2.33	28									
722.8	Very stiff, black CLAY	2.38	B	289	2.38	29									
		1.89	B	357	1.89	21									
	Stiff to hard, brown CLAY	4.43	B	368	4.43	18									
		4.95	B	1015	4.95	20									
		4.51	B	61510	4.51	20									
712.8	Stiff to very stiff, gray SILTY CLAY to SILTY CLAY LOAM	3.20	B	615	3.20	15									
		1.48	B	479	1.48	14									
		1.75	B	5810	1.75	14									

<b>GENERAL NOTES</b> Begin Drilling <u>04-20-2005</u> Complete Drilling <u>04-20-2005</u> Drilling Contractor <u>DLZ</u> Drill Rig <u>D-120 TMR</u> Driller <u>K&amp;R</u> Logger <u>B. Panozzo</u> Checked by <u>S. Janowski</u> Drilling Method <u>3.25" ID HSA; Boring backfilled upon completion</u>				<b>WATER LEVEL DATA</b> While Drilling <u>21.00 ft</u> At Completion of Drilling <u>14.00 ft</u> Time After Drilling <u>NA</u> Depth to Water <u>NA</u> The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			
--	--	--	--	--	--	--	--

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

 **DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**CULVERT 'K'**  
**BORING LOG**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION 12 & 13 WRS-3  
 STATION 381+23.02  
 WILL COUNTY  
 STRUCTURE NUMBER 099-C016

BENCH MARK: BM 242  
 STA. 388+66.0, 89.18' RT., ELEV. 735.64  
 MARK ON THE WESTERLY FLANGE BOLT  
 OF FIRST HYDRANT WEST OF LOCUST  
 STREET, SOUTH SIDE OF ROUTE 30.

EXISTING STRUCTURE: NO. UNKNOWN  
 24" Ø X 10' REINFORCED CONCRETE PIPE  
 NO SALVAGE.

PROPOSED IMPROVEMENTS:  
 EXISTING STRUCTURE TO BE REMOVED  
 AND REPLACED WITH A SINGLE 4'-0" X  
 2'-0" X 17'-6" BOX CULVERT IN STAGES  
 MAINTAINING TWO LANES OF TRAFFIC.

**TOTAL BILL OF MATERIALS**

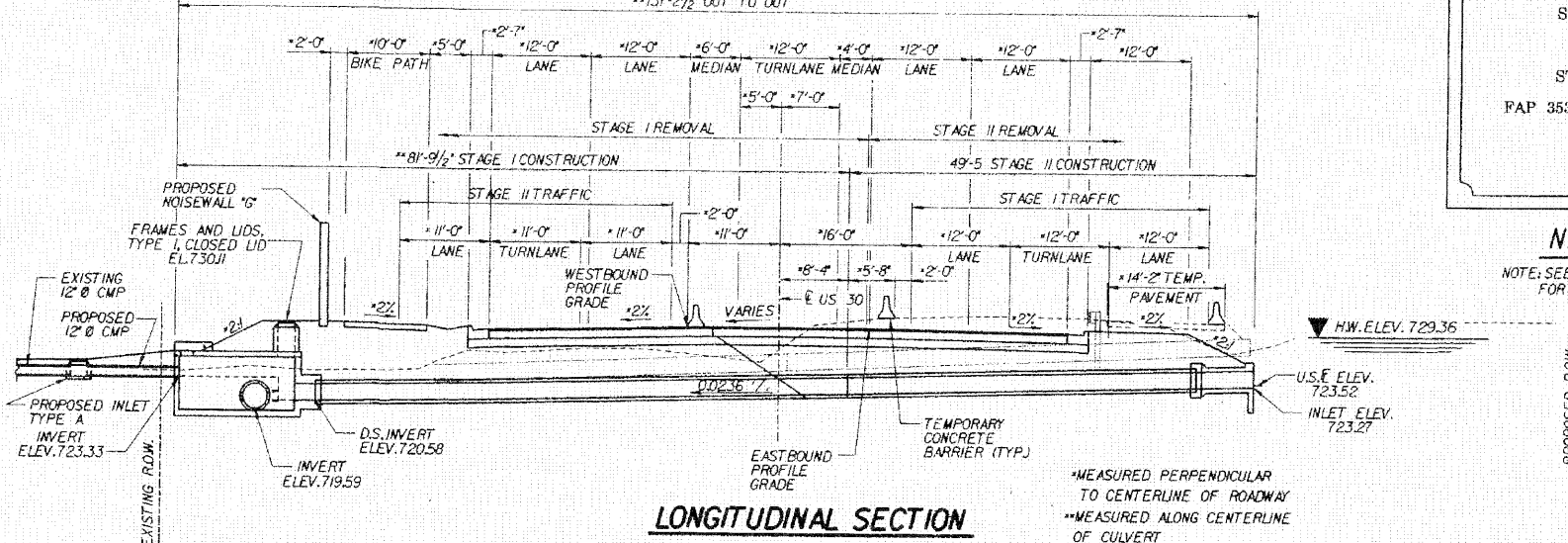
ITEM	UNIT	QUANTITY
STONE RIPRAP, CLASS A5	TON	30
FILTER FABRIC	SO. YD.	30
REMOVAL OF EXISTING STRUCTURES NO. 9	EACH	1
REINFORCEMENT BARS	POUND	3,690
NAME PLATES	EACH	1
CONCRETE BOX CULVERTS	CU. YD.	19.4
PRECAST CONCRETE BOX CULVERT 4' x 2'	FT.	107.0
FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	1
TEMPORARY SOIL RETENTION SYSTEM	SO. FT.	185
SPECIAL GRATE NO. 2	EACH	1

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

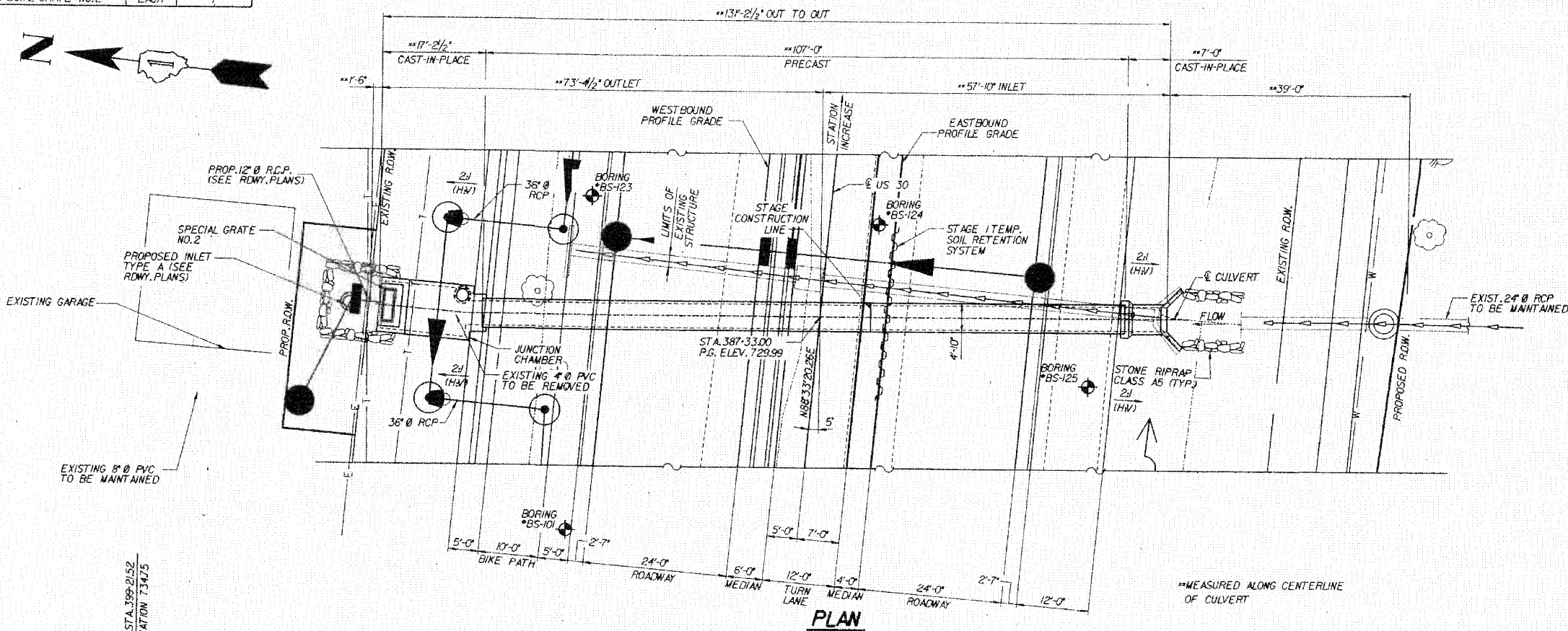
STATION 387+33.00  
 BUILT BY  
 STATE OF ILLINOIS  
 FAP 353 SECT. (12 & 13) WRS-3  
 LOADING HS20  
 STR. NO. 099-C017

**NAME PLATE**

NOTE: SEE STANDARD DRAWING 515001  
 FOR NAME PLATE DETAILS.



**LONGITUDINAL SECTION**



**PLAN**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL.	1235	715

SHEET NO. 1  
 12 SHEETS

**DESIGN SPECIFICATIONS**

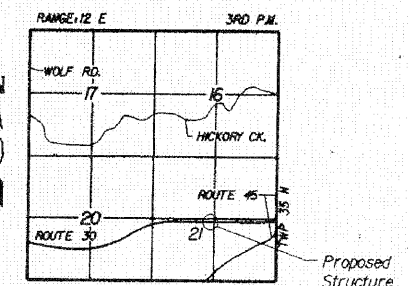
AASHTO 2002 SPECIFICATIONS.  
**LOADING HS20-44**  
 ALLOW 50"/SQ. FT. FOR FUTURE WEARING SURFACE.

**DESIGN STRESSES**

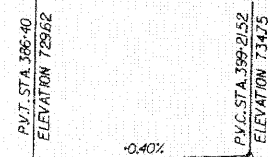
**FIELD UNITS**  
 f'c - 3,500 PSI  
 fy - 60,000 PSI (REINFORCEMENT)  
**PRECAST UNITS**  
 f'c - 5,000 PSI  
 fy - 60,000 PSI (REINFORCEMENT)

**GENERAL NOTES**

- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 706 GR60. SEE SPECIAL PROVISIONS.
- CAST-IN-PLACE BARREL SHALL BE POURED MONOLITHICALLY WITH THE WINGWALLS.
- EXPOSED EDGES SHALL HAVE A 3/4" CHAMFER.
- IN ACCORDANCE WITH ARTICLE 540.04 OF THE STANDARD SPECIFICATIONS, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DIVERT STREAM FLOW DURING CONSTRUCTION IN ORDER TO KEEP THE CONSTRUCTION AREAS FREE OF WATER. THE METHOD OF WATER DIVERSION SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND THE COST SHALL BE INCLUDED WITH REMOVAL OF EXISTING STRUCTURES NO. 9. CLEAN FILL (GRANULAR) MATERIAL WILL ONLY BE ALLOWED.
- THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M259 (DESIGN FILL HEIGHT - 6'-0").
- A CANTILEVERED SHEET PILING DESIGN DOES NOT APPEAR FEASIBLE AND ADDITIONAL MEMBERS OR OTHER RETENTION SYSTEMS MAY BE NECESSARY. THE CONTRACTOR SHALL SUBMIT A TEMPORARY SOIL RETENTION SYSTEM DESIGN INCLUDING PLAN DETAILS AND CALCULATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER.



**LOCATION SKETCH**



**PROFILE GRADE**

• P.G. WBD & EBD.

DESIGNED	ASP
CHECKED	CDG
DRAWN	BRM
CHECKED	ASP

**WATERWAY INFORMATION**

DRAINAGE AREA (SQ. MI.) - 0.037		LOW GRADE ELEV. (FEET) EXIST - 731.00 AT STA. 385-74				MAX. RECORDED H.W.E. -				
		PROPOSED - 729.49 AT STA. 385-75								
FLOOD	FREQ. YR.	DISCHARGE C.F.S.	WATERWAY OPENING (square feet)		NATURAL H.W.E. (feet)		CREATED HEAD (feet)		HEADWATER ELEVATION (feet)	
			EXISTING	PROPOSED	EXISTING U/S Face	PROPOSED U/S Face	EXISTING	PROPOSED	EXISTING	PROPOSED
OVERTOPPING (EX.)	9	25	3.14		728.26		2.74		731.00	
	10	29	3.14	8.00	728.26	729.36	2.49	0.00	730.75	726.86
DESIGN	50	51	3.14	8.00	728.26	729.36	2.79	0.00	731.05	727.74
BASE	100	62	3.14	8.00	728.26	729.36	2.81	0.00	731.07	728.37
OVERTOPPING (PR.)	190	77		8.00		729.36		0.3		729.49
MAX. CALC.	500	135		3.14		728.26		2.87		731.13



Wayne A. Trex  
 11-30-10

REVISIONS	
NAME	DATE

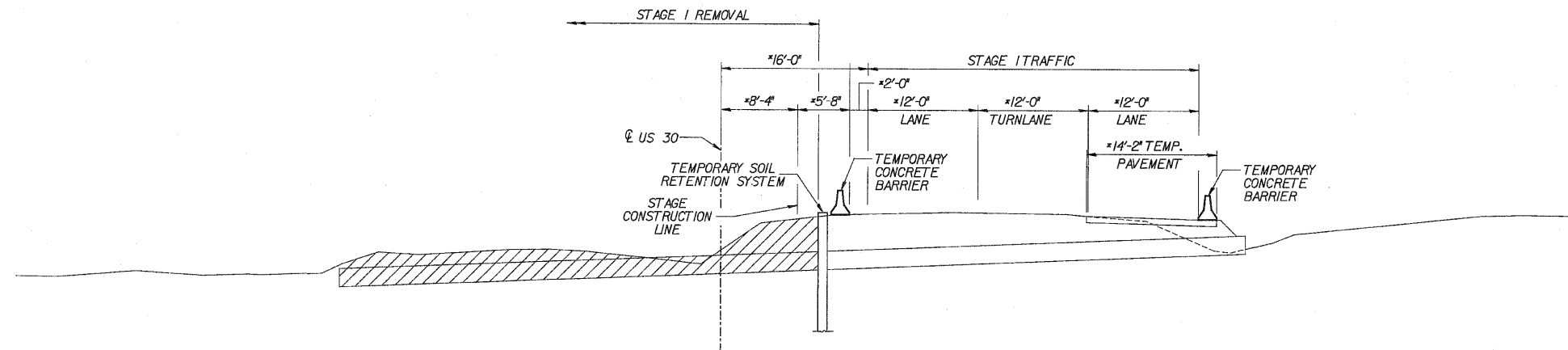
**DLZ** 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005

**CULVERT 'L'**  
**GENERAL PLAN**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 387+33.00  
 WILL COUNTY  
 STRUCTURE NUMBER 099-C017



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	716
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

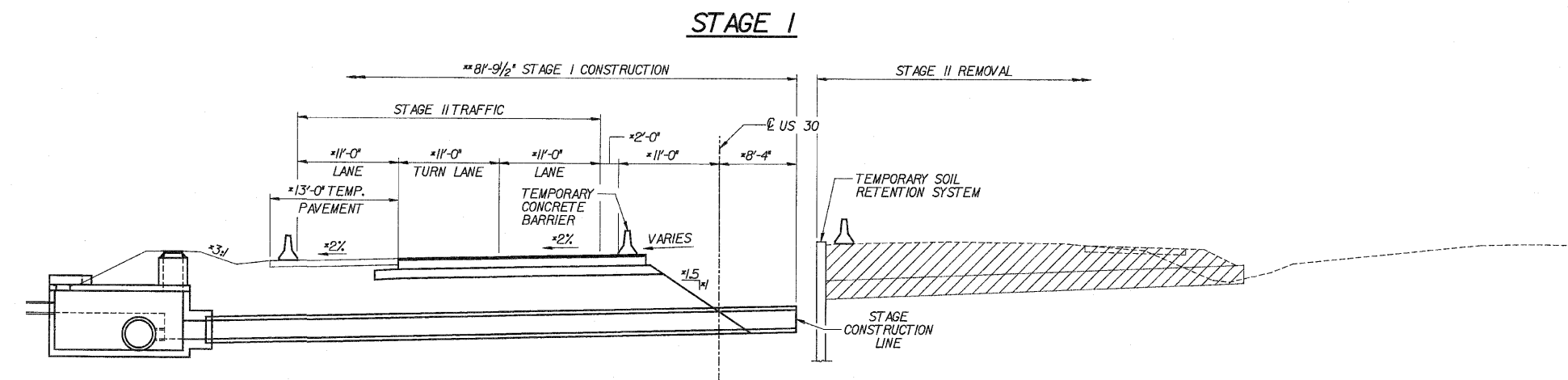
\* SBC 12 & 13 WRS-3  
\* CONTRACT NO. 69479



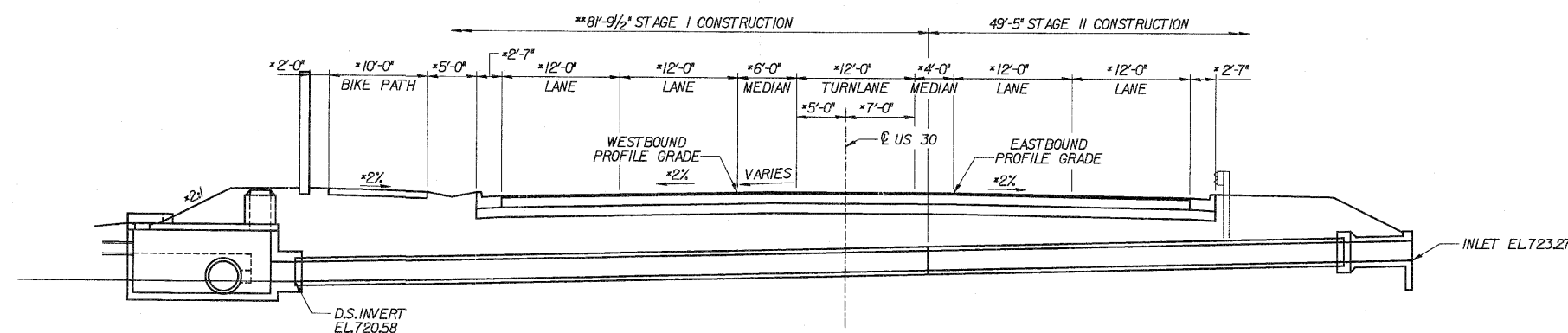
**PROPOSED STAGING NOTES**

- STAGE I REMOVAL AND CONSTRUCTION
1. MAINTAIN TWO LANES OF TRAFFIC.
  2. INSTALL TEMPORARY PAVEMENT.
  3. INSTALL TEMPORARY CONCRETE BARRIERS
  4. INSTALL STAGE I TEMPORARY SOIL RETENTION SYSTEM
  5. REMOVE PORTION OF NORTHERN END OF EXISTING STRUCTURE.
  6. CONSTRUCT STAGE I PORTION OF THE STRUCTURE.
  7. CONSTRUCT ROADWAY PAVEMENT.

- STAGE II REMOVAL AND CONSTRUCTION
1. INSTALL TEMPORARY CONCRETE BARRIER.
  2. REMOVE REMAINDER OF EXISTING STRUCTURE.
  3. CONSTRUCT STAGE II PORTION OF THE STRUCTURE.
  4. CONSTRUCT ROADWAY PAVEMENT.



**STAGE II**



**FINAL CROSS SECTION**

\* MEASURED PERPENDICULAR TO CENTERLINE OF ROADWAY.  
\*\* MEASURED ALONG CENTERLINE OF CULVERT.

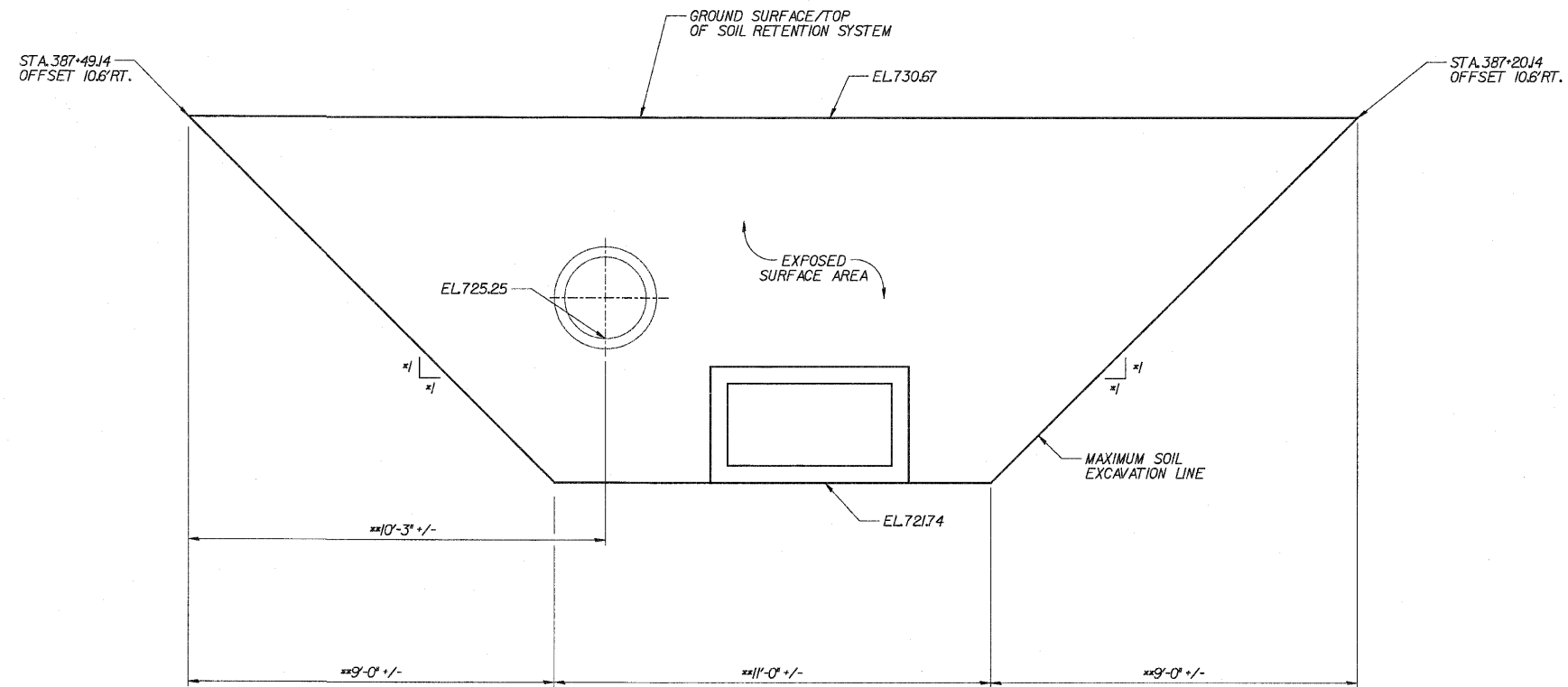
**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

**LEGEND**  
[Hatched Box] REMOVAL OF EXISTING STRUCTURES

REVISIONS	
NAME	DATE

**CULVERT 'L'**  
**PROPOSED STAGE PLANNING**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017



**STAGE I TEMPORARY SOIL RETENTION SYSTEM**

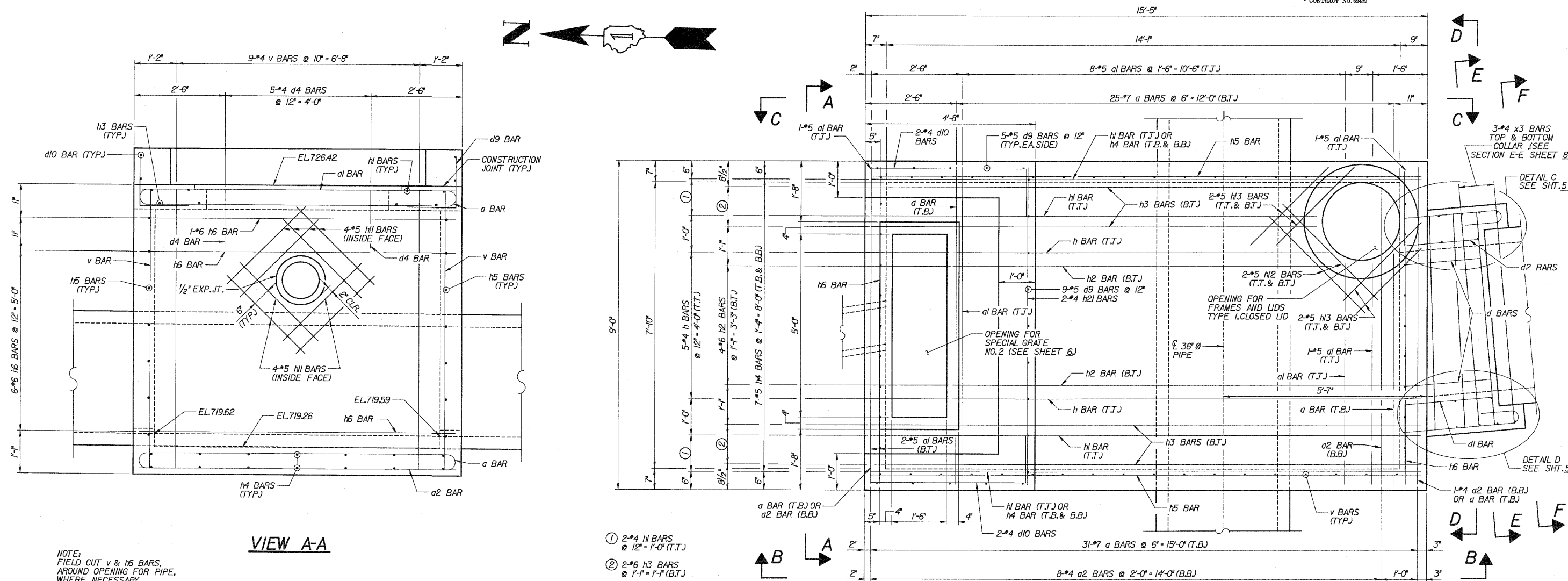
(LOOKING SOUTH)  
\* DENOTES PERPENDICULAR TO C. OF CULVERT  
\*\* MEASURED ALONG C. OF RETENTION SYSTEM

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

**DLZ** DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**CULVERT 'L'**  
**TEMPORARY SOIL RETENTION SYSTEM**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017



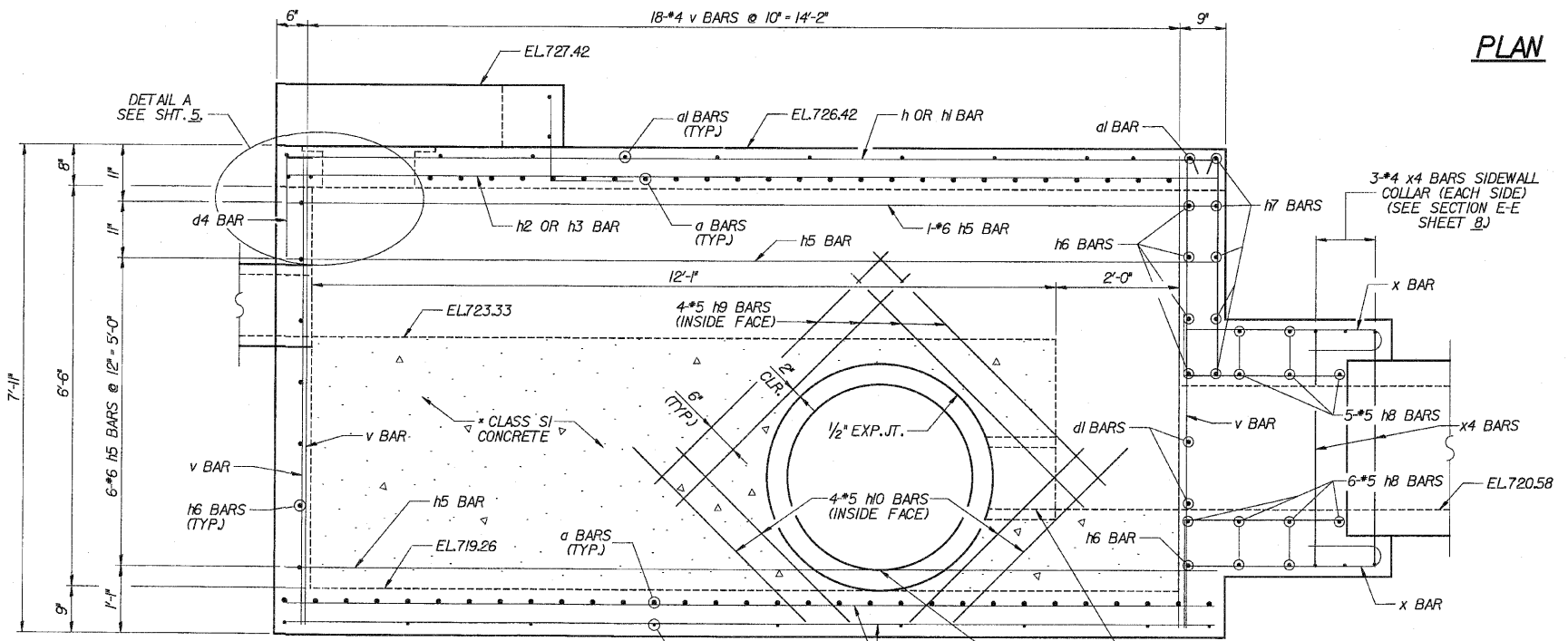
**VIEW A-A**

**PLAN**

NOTE:  
FIELD CUT v & h6 BARS  
AROUND OPENING FOR PIPE,  
WHERE NECESSARY.

BACKFILLING OPERATIONS AROUND  
CHAMBER SHALL BE COMPLETED  
PRIOR TO PLACING CLASS SI CONCRETE  
INSIDE CHAMBER.

NOTE:  
FIELD CUT a,d,h,n & h3 BARS  
AROUND OPENING FOR FRAME  
& LID WHERE NECESSARY.



**VIEW B-B**

\* COST OF CLASS SI CONCRETE SHALL BE INCLUDED  
IN THE COST OF CONCRETE BOX CULVERTS

\*\* 12" Ø ORIFICE SHALL BE SCHEDULE 40 PVC AND  
SHALL BE CORED INTO 36" Ø RCP. COST TO BE  
INCLUDED IN CONCRETE BOX CULVERTS.

NOTE:  
FIELD CUT v & h5 BARS  
AROUND OPENING FOR  
PIPE WHERE NECESSARY.

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

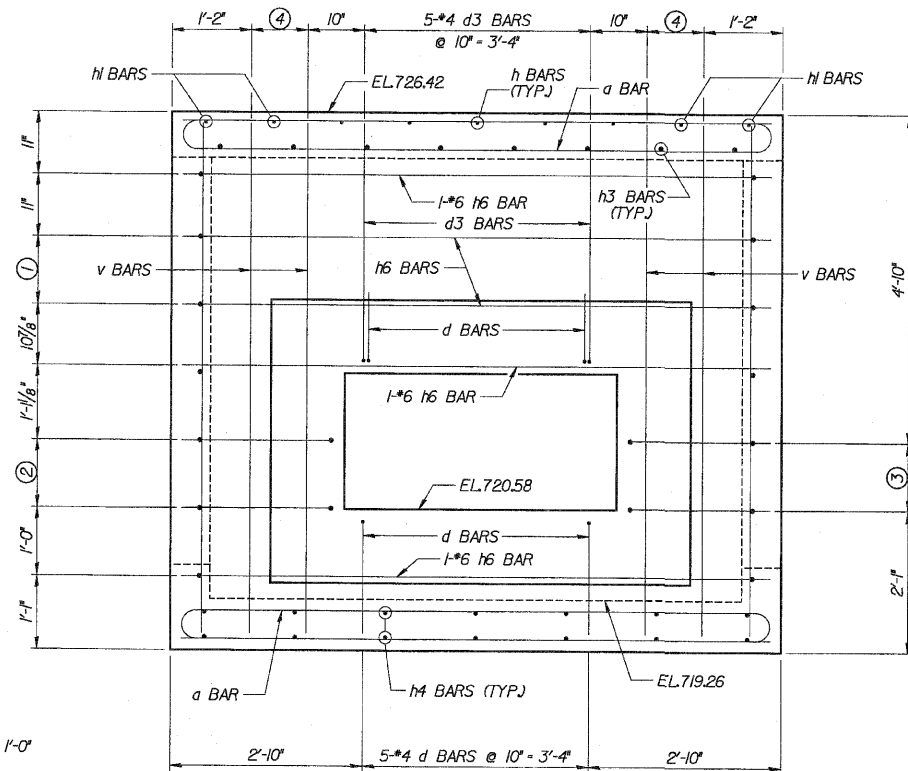
**LEGEND**

T.T.- TOP OF TOP SLAB  
B.T.- BOTTOM OF TOP SLAB  
T.B.- TOP OF BOTTOM SLAB  
B.B.- BOTTOM OF BOTTOM SLAB

**DLZ** 85 W. ALGONQUIN RD. STE. 220  
ARLINGTON HEIGHTS, IL 60005

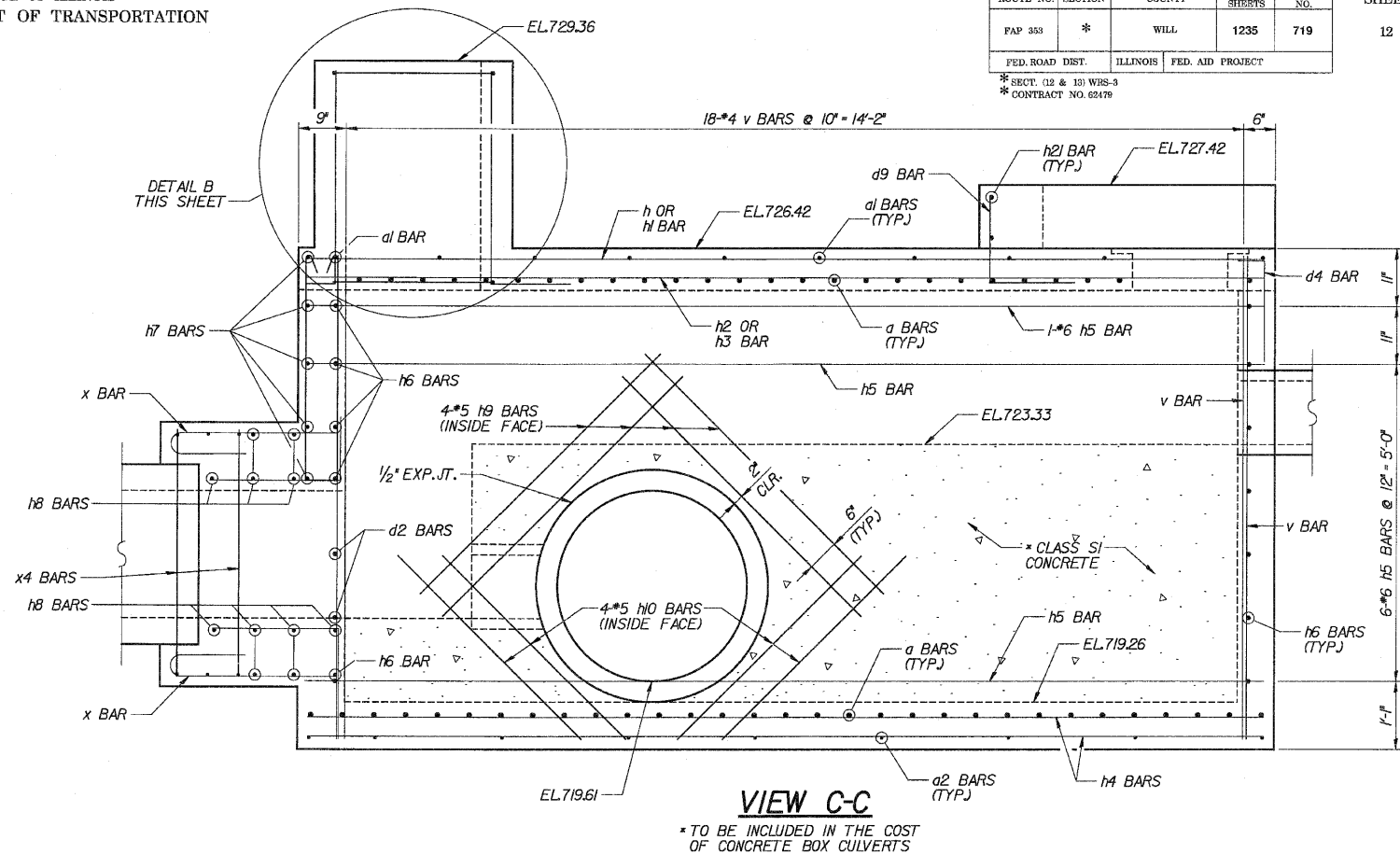
**CULVERT 'L'**  
**JUNCTION CHAMBER PLAN & ELEV.**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	719
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* SECT. 12 & 13) WRS-3 * CONTRACT NO. 62476				

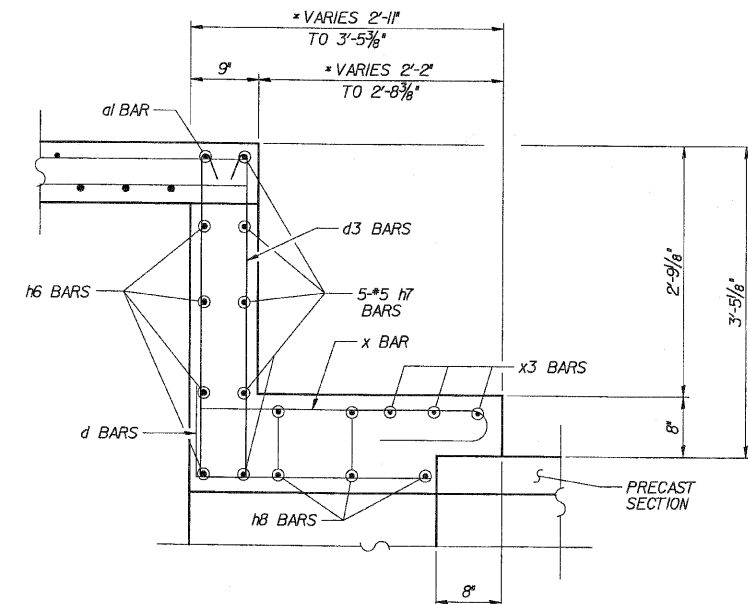


- ① 2-#6 #16 BARS @ 12" - 1'-0"
- ② 2-#6 d1 BARS @ 12" - 1'-0"
- ③ 2-#6 d2 BARS @ 12" - 1'-0"
- ④ 2-#4 v BARS @ 10" - 1'-0"

(TOP & BOTTOM)  
SEE FIELD CUTTING DIAGRAM  
SHEET 10.  
**VIEW D-D**

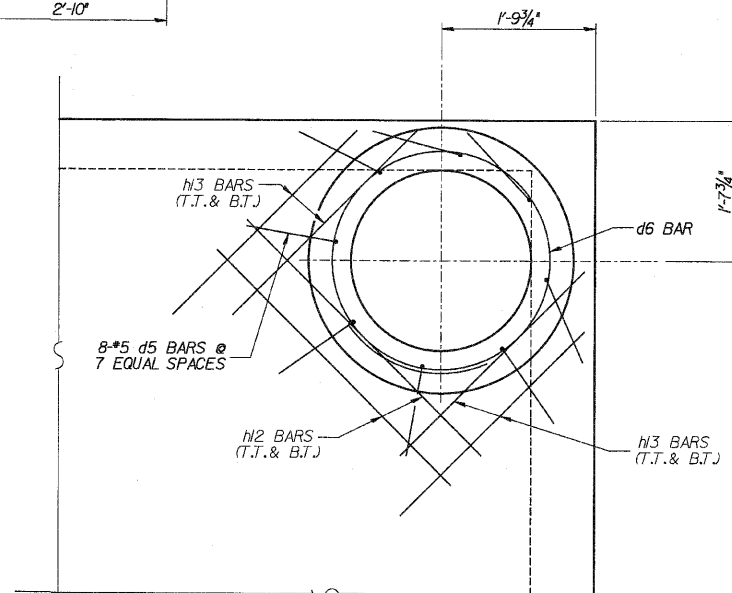


**VIEW C-C**

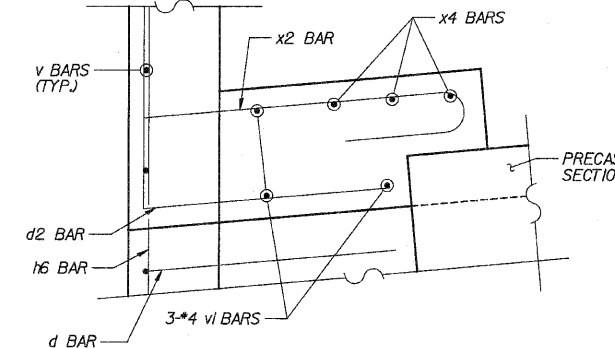


**PRECAST TO CAST-IN-PLACE  
CONNECTION COLLAR**

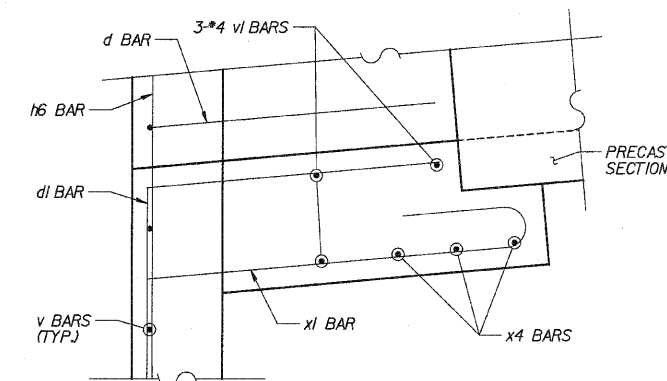
\* MEASURED PERPENDICULAR  
TO CHAMBER WALL



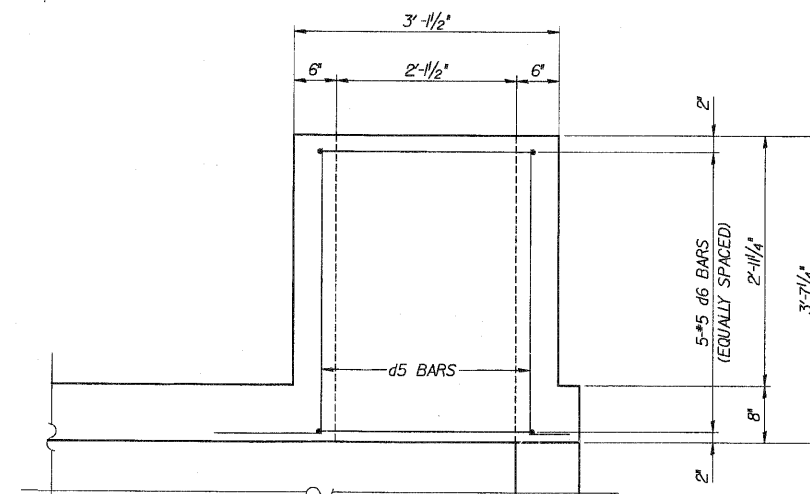
**DETAIL B**



**DETAIL C**



**DETAIL D**



**DETAIL A**

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

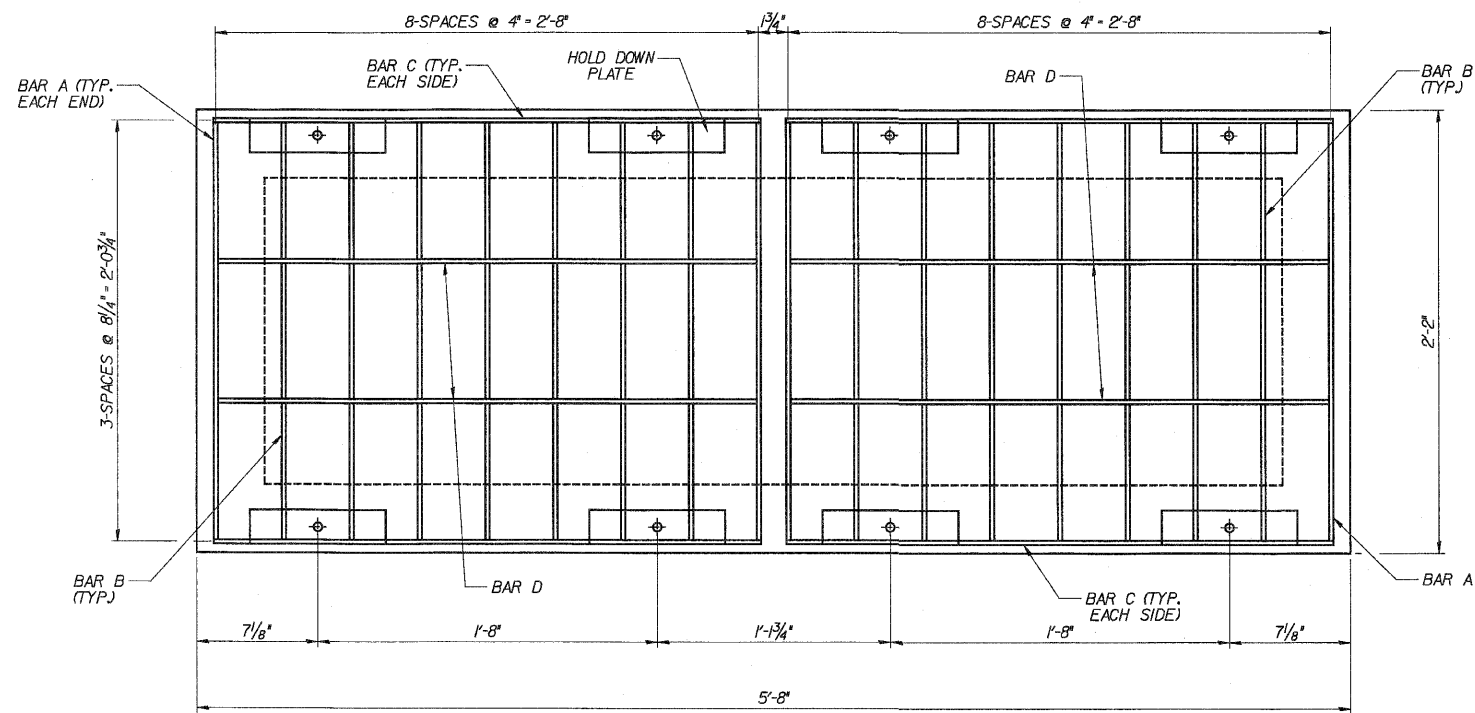
**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**CULVERT 'L'  
JUNCTION CHAMBER DETAILS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

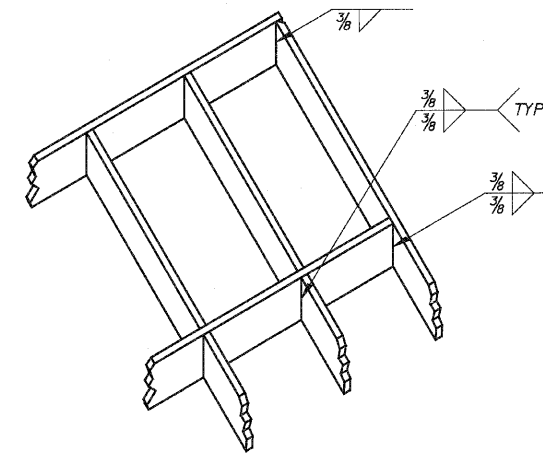
REVISIONS	
NAME	DATE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 553	*	WILL	1235	720
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

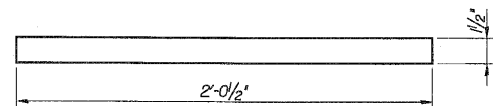
\* SHT. (12 & 13) WRS-3  
\* CONTRACT NO. 02479



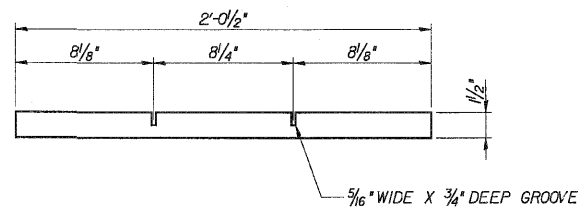
**FRAME AND GRATE PLAN**



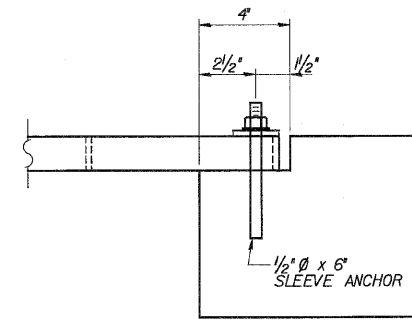
**ISOMERIC VIEW OF  
FRAME AND GRATE**



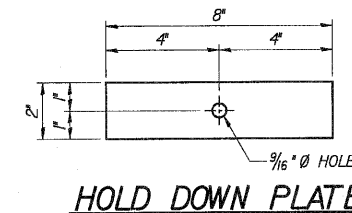
**BAR A**  
2'-0 1/2" x 1/2" x 1/4"  
(2-EA. GRATE, 4 TOTAL)



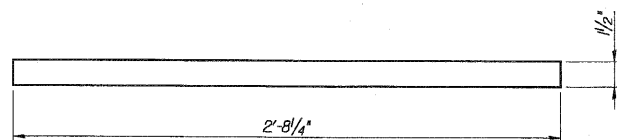
**BAR B**  
2'-0 1/2" x 1/2" x 1/4"  
(7-EA. GRATE, 14 TOTAL)



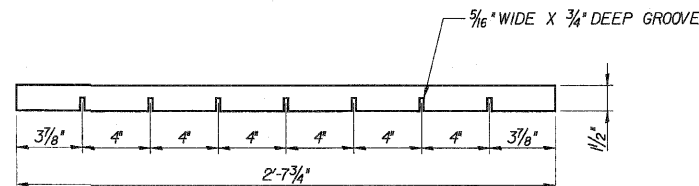
**SLEEVE ANCHOR**  
1/2" Ø x 6"  
(4-EA. GRATE, 8 TOTAL)



**HOLD DOWN PLATE**  
8" x 2" x 1/4"  
(4-EA. GRATE, 8 TOTAL)



**BAR C**  
2'-8 1/4" x 1/2" x 1/4"  
(2-EA. GRATE, 4 TOTAL)



**BAR D**  
2'-7 3/4" x 1/2" x 1/4"  
(2-EA. GRATE, 4 TOTAL)

**NOTES**

1. FABRICATOR TO FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION
2. ALL STEEL SHALL BE GALVANIZED AFTER FABRICATION AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M111.
3. ALL STRUCTURAL STEEL SHALL BE A36 STEEL, F<sub>y</sub>=36,000psi. STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH SECTION 505 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
4. FIELD WELDING IS PROHIBITED. ALL WELDING AND WELDING MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT AMERICAN WELDING SOCIETY (AWS) SPECIFICATIONS.
5. SEE SPECIAL PROVISION FOR "SPECIAL GRATE NO.2"
6. IF FABRICATOR CHOOSES TO ALTER GRATE DESIGN, SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

**DLZ** 85 W. Algonquin Rd. Ste. 220  
DLZ Illinois, Inc. Arlington Heights IL 60005

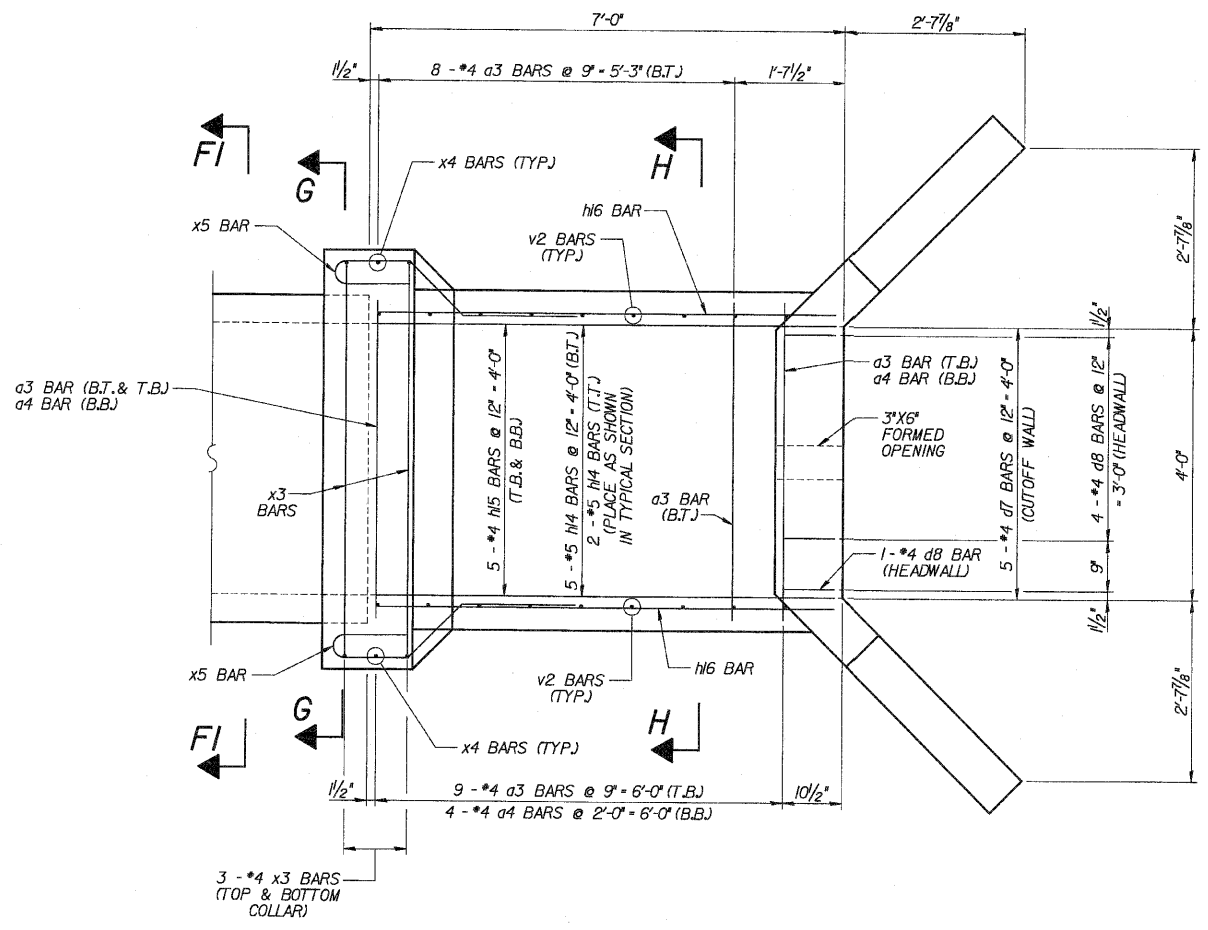
DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

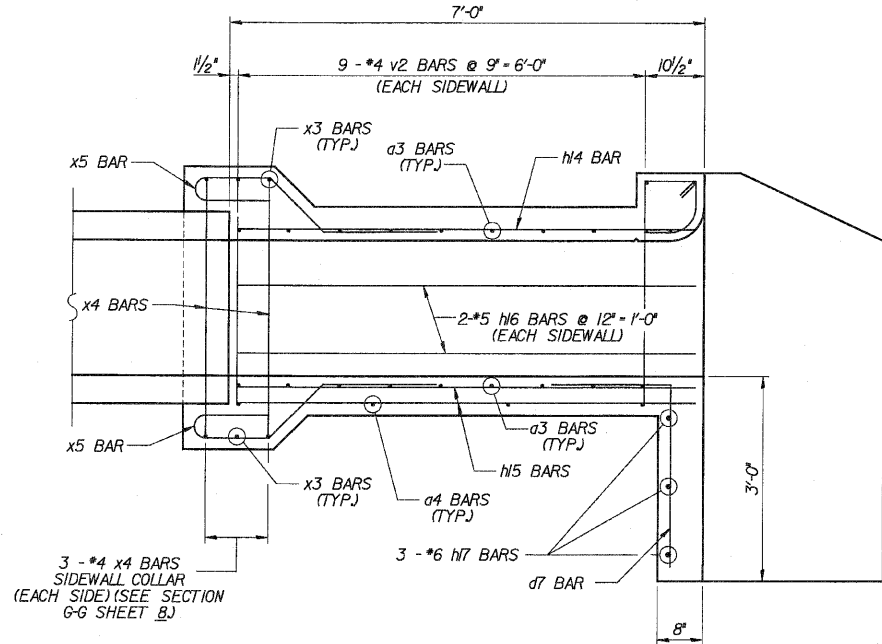
**CULVERT 'L'**  
**SPECIAL GRATE NO.2**  
U.S.ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P.353 (U.S.30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	721
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

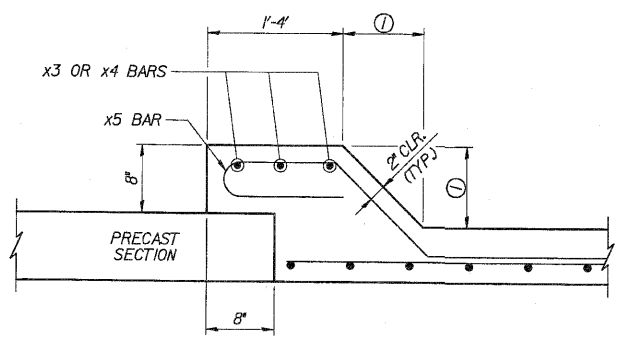
\* SECT. 12 & 13) WRS-3  
\* CONTRACT NO. 62479



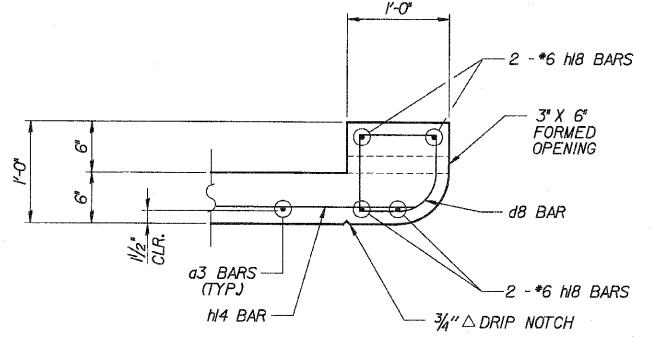
**PLAN**



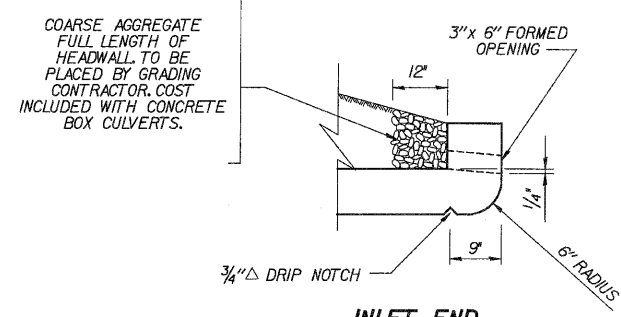
**ELEVATION**



**PRECAST TO CAST-IN-PLACE CONNECTION COLLAR**



**HEADWALL DETAIL**



**INLET END DRAIN DETAIL**

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

① TOP SLAB = 7"  
BOTTOM SLAB = 6"  
SIDEWALLS = 7"

**LEGEND**

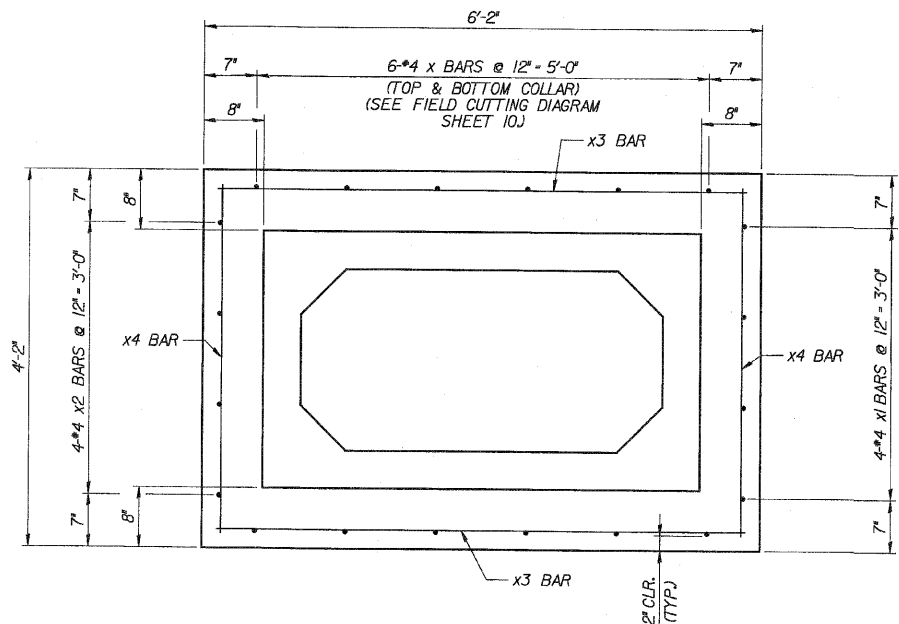
T.T. = TOP OF TOP SLAB  
B.T. = BOTTOM OF TOP SLAB  
T.B. = TOP OF BOTTOM SLAB  
B.B. = BOTTOM OF BOTTOM SLAB

REVISIONS	
NAME	DATE

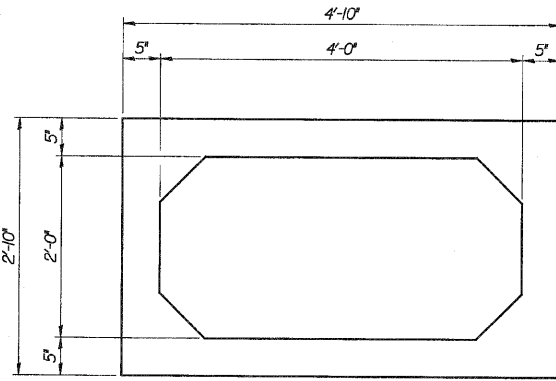
**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**CULVERT 'L'**  
**INLET PLAN & ELEVATION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION 12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

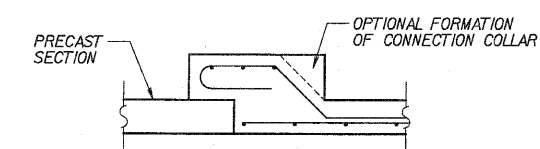
\* SECT. 12 & 13 WRS-3  
\*\* CONTRACT NO. 62479



**SECTION E-E**  
JUNCTION CHAMBER PRECAST TO  
CAST-IN-PLACE CONNECTION COLLAR.

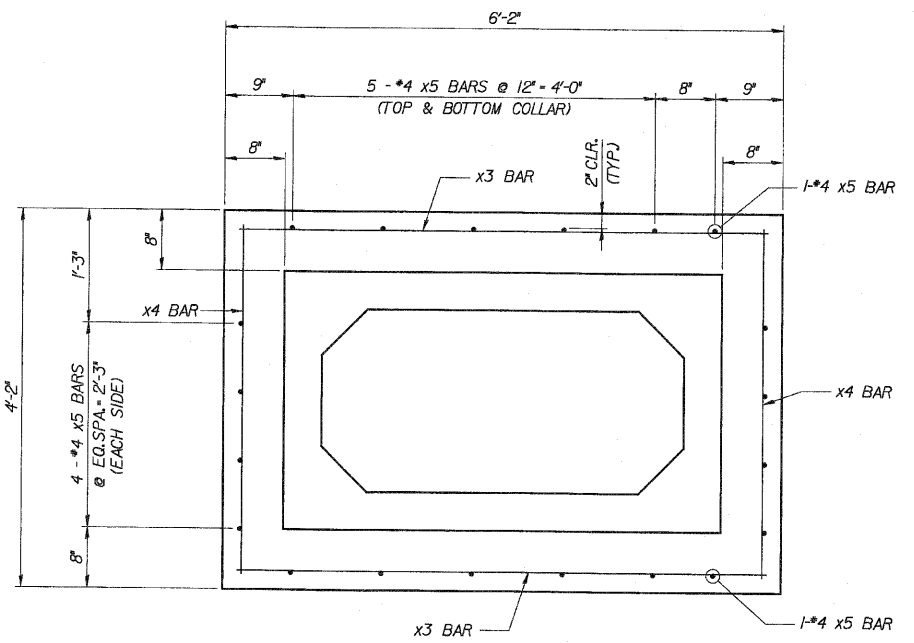


**SECTION F-F & FI-FI**

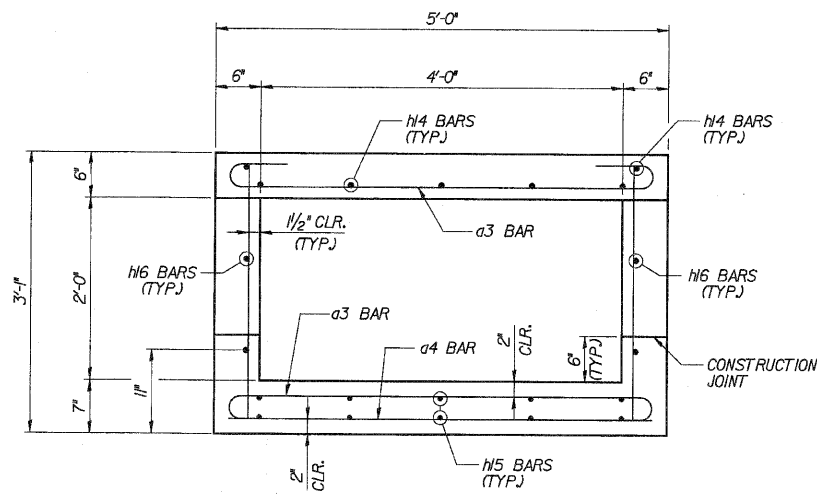


**OPTIONAL PRECAST TO CAST-IN-PLACE  
CONNECTION COLLAR**

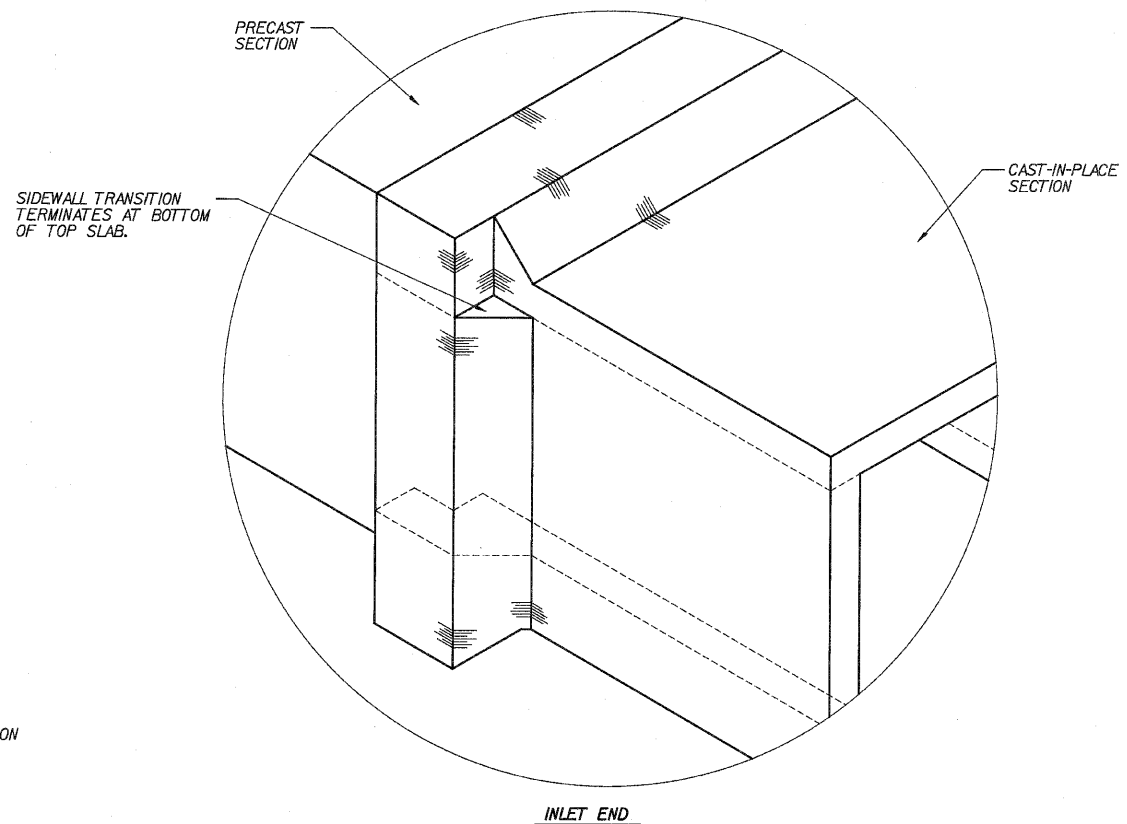
NOTE:  
ADDITIONAL CONCRETE USED FOR THE  
OPTIONAL COLLAR FORMATION WILL BE  
PROVIDED AT THE CONTRACTOR'S EXPENSE.



**SECTION G-G**  
INLET PRECAST TO CAST-IN-PLACE  
CONNECTION COLLAR



**SECTION H-H**



**ISOMETRIC VIEW OF INLET  
CONNECTION COLLAR**

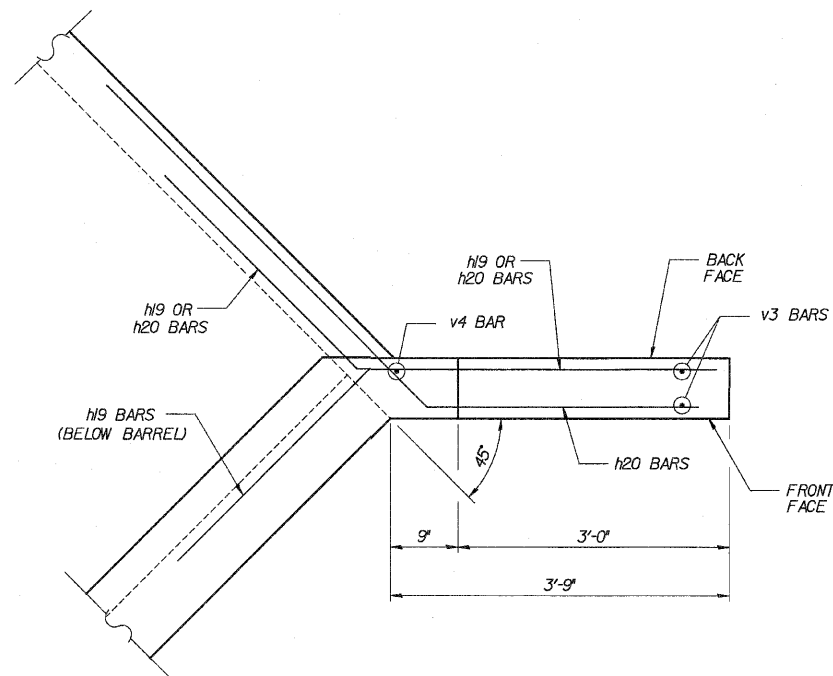
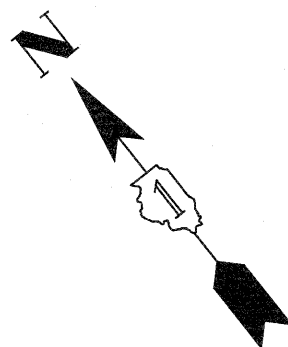
DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

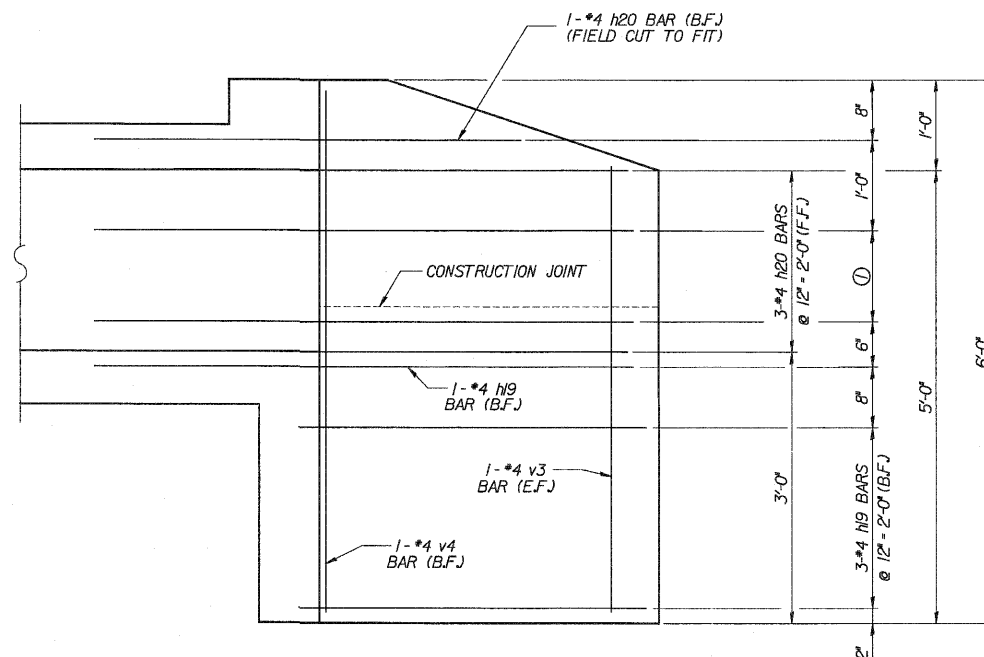
**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**CULVERT 'L'**  
**TYPICAL SECTIONS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	723
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* SECT. 12 & 13 WRS-3				
* CONTRACT NO. 62479				

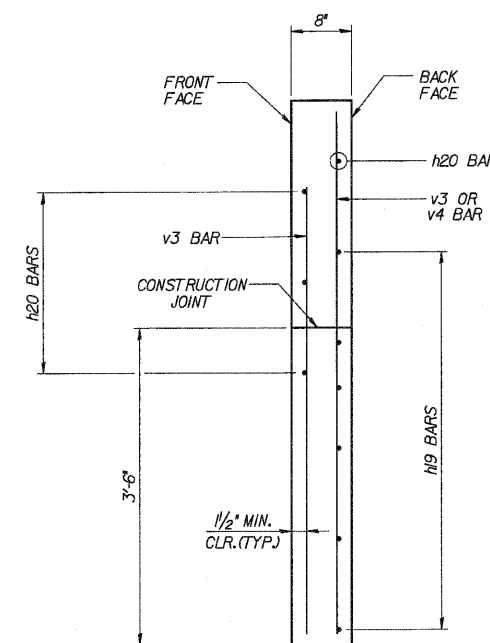


**WING A & B PLAN**



**WING A & B ELEVATION**

① 2 - \*4 H9 BARS @ 12'-1'-0" (B.F.)



**WING A & B TYPICAL SECTION**

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

**LEGEND**

F.F. = FRONT FACE  
B.F. = BACK FACE  
E.F. = EACH FACE

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

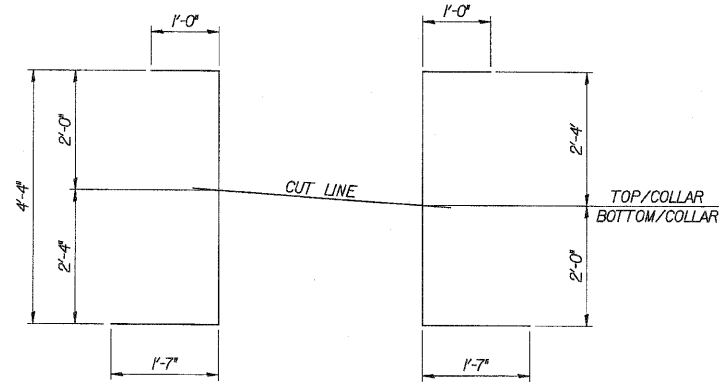
**CULVERT 'L'**  
**WINGS A & B**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017



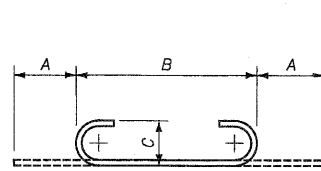
\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479

**BILL OF MATERIAL**

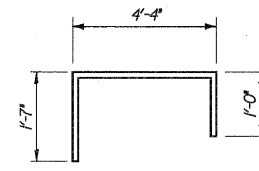
Bar	No.	Size	Length	Shape
a	56	7	10'-4"	[Diagram]
a1	13	5	8'-8"	[Diagram]
a2	9	4	8'-8"	[Diagram]
a3	17	4	5'-8"	[Diagram]
a4	4	4	4'-8"	[Diagram]
d	5	4	6'-11"	[Diagram]
d1	2	6	4'-7"	[Diagram]
d2	2	6	4'-1"	[Diagram]
d3	5	4	8'-6"	[Diagram]
d4	5	4	2'-0"	[Diagram]
d5	8	5	4'-7"	[Diagram]
d6	5	5	9'-7"	[Diagram]
d7	5	4	4'-5"	[Diagram]
d8	5	4	3'-10"	[Diagram]
d9	19	5	2'-8"	[Diagram]
d10	4	4	5'-8"	[Diagram]
h	5	4	12'-10"	[Diagram]
h1	4	4	15'-1"	[Diagram]
h2	4	6	12'-10"	[Diagram]
h3	4	6	15'-1"	[Diagram]
h4	14	5	15'-1"	[Diagram]
h5	14	6	15'-1"	[Diagram]
h6	12	6	8'-8"	[Diagram]
h7	5	5	8'-8"	[Diagram]
h8	11	5	5'-10"	[Diagram]
h9	8	5	5'-4"	[Diagram]
h10	8	5	4'-0"	[Diagram]
h11	8	5	3'-1"	[Diagram]
h12	4	5	3'-9"	[Diagram]
h13	8	5	3'-0"	[Diagram]
h14	7	5	6'-9"	[Diagram]
h15	10	4	6'-9"	[Diagram]
h16	4	5	6'-9"	[Diagram]
h17	3	6	4'-5"	[Diagram]
h18	4	6	3'-9"	[Diagram]
h19	12	4	6'-10"	[Diagram]
h20	8	4	8'-0"	[Diagram]
h21	2	4	8'-8"	[Diagram]
v	49	4	7'-7"	[Diagram]
v1	6	4	3'-10"	[Diagram]
v2	18	4	2'-9"	[Diagram]
v3	4	4	4'-11"	[Diagram]
v4	2	4	5'-9"	[Diagram]
x	6	4	8'-2"	[Diagram]
x1	4	4	4'-4"	[Diagram]
x2	4	4	3'-10"	[Diagram]
x3	12	4	5'-10"	[Diagram]
x4	12	4	3'-10"	[Diagram]
x5	20	4	5'-1"	[Diagram]
CONCRETE BOX CULVERTS			CU. YD.	19.4
REINFORCEMENT BARS			POUND	3,690



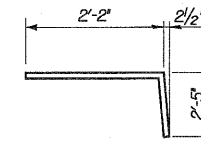
**BAR d**  
5 BARS-1 SET



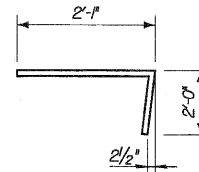
**BAR a, a3 OR x**



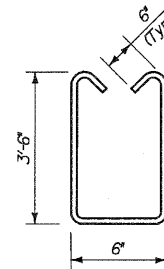
**BAR d**



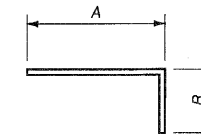
**BAR d1**



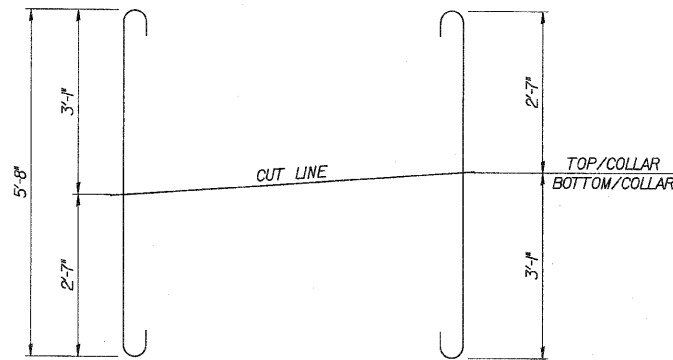
**BAR d2**



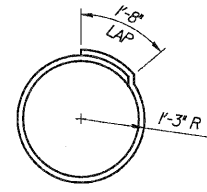
**BAR d3**



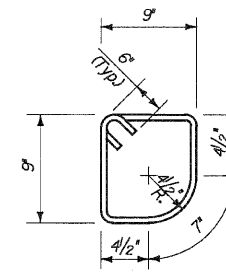
**BARS d4, d5, d7, d9, OR d10**



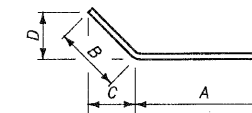
**BAR x**  
6 BARS-1 SET



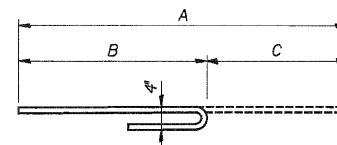
**BAR d6**



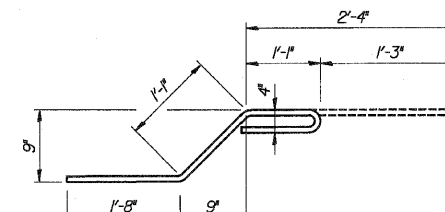
**BAR d8**



**BARS h19 THRU h20**



**BARS x1 THRU x2**



**BAR x5**

**BAR CUTTING DIAGRAMS**

ORDER BARS FULL LENGTH. CUT AS SHOWN AND USE REMAINDER OF BARS IN BOTTOM OF CONNECTION COLLAR.

**BAR BENDING DIAGRAMS**

Bar	A		B		C		D	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
a	0	10	8	8	0	7		
a3	0	6	4	8	0	4		
d4	1	7	0	5				
d5	1	4	3	3				
d7	2	8	1	9				
d9	1	4	1	4				
d10	4	4	1	4				
h19	3	10	3	0	2	1/2	2	1/2
h20	5	0	3	0	2	1/2	2	1/2
x	1	3	5	8	0	4		
x1	4	4	3	1	1	3		
x2	3	10	2	7	1	3		

DESIGNED	ASP
CHECKED	CDS
DRAWN	BEM
CHECKED	ASP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

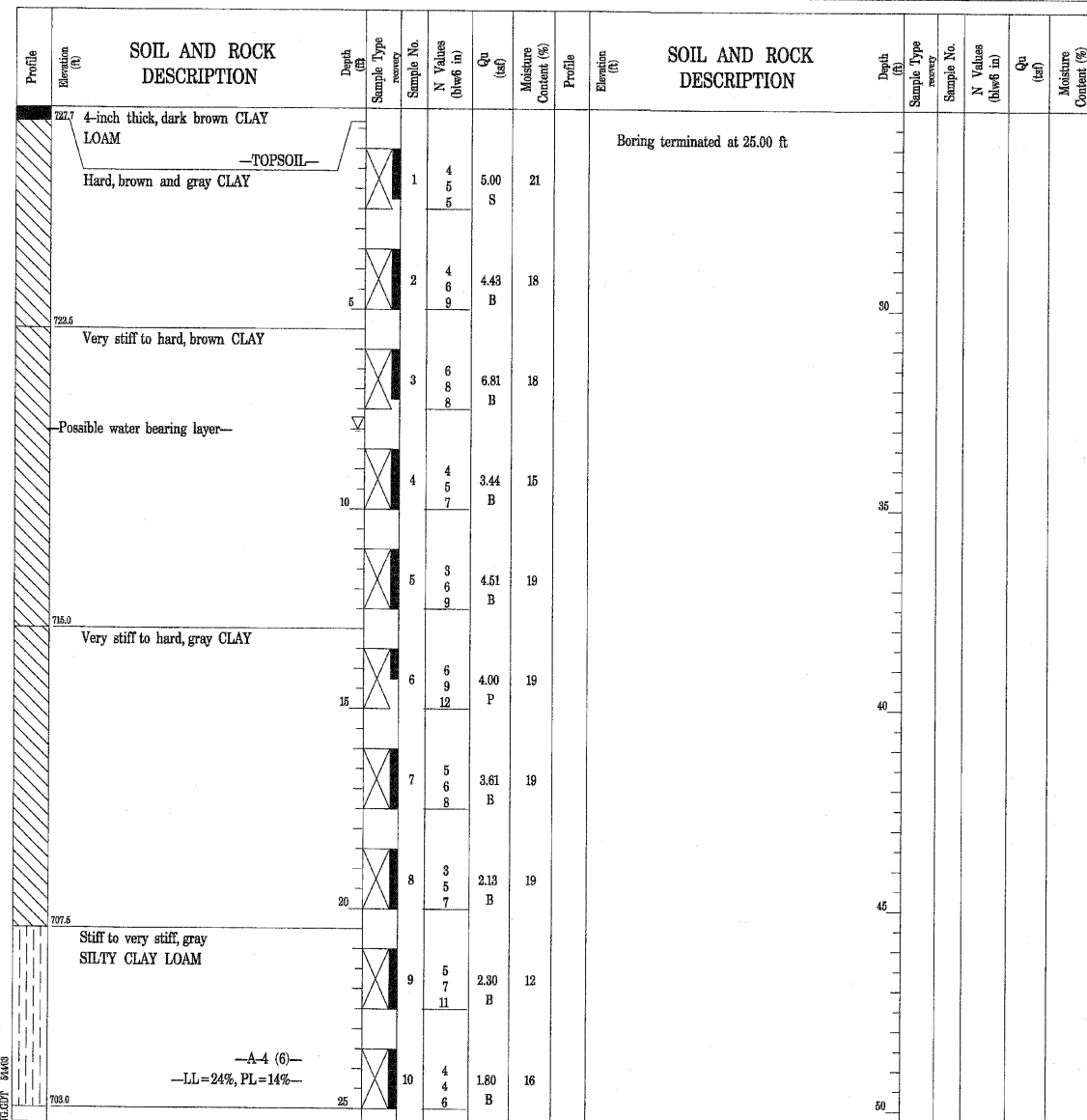
**CULVERT 'L'**  
**BARBILL & DETAILS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-101**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21

Datum: NGVD  
Elevation: 728.01 ft  
North: 1763133.37 ft  
East: 1113784.11 ft  
Station: 386+94.86  
Offset: 38.64 LT

Page 1 of 1



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-21-2003	Complete Drilling	02-21-2003
Drilling Contractor	TSC	Drill Rig	CME 550 ATV
Driller	E&D	Logger	H. Suhail
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion		
While Drilling	8.00 ft	At Completion of Drilling	NA
Time After Drilling	NA	Depth to Water	NA

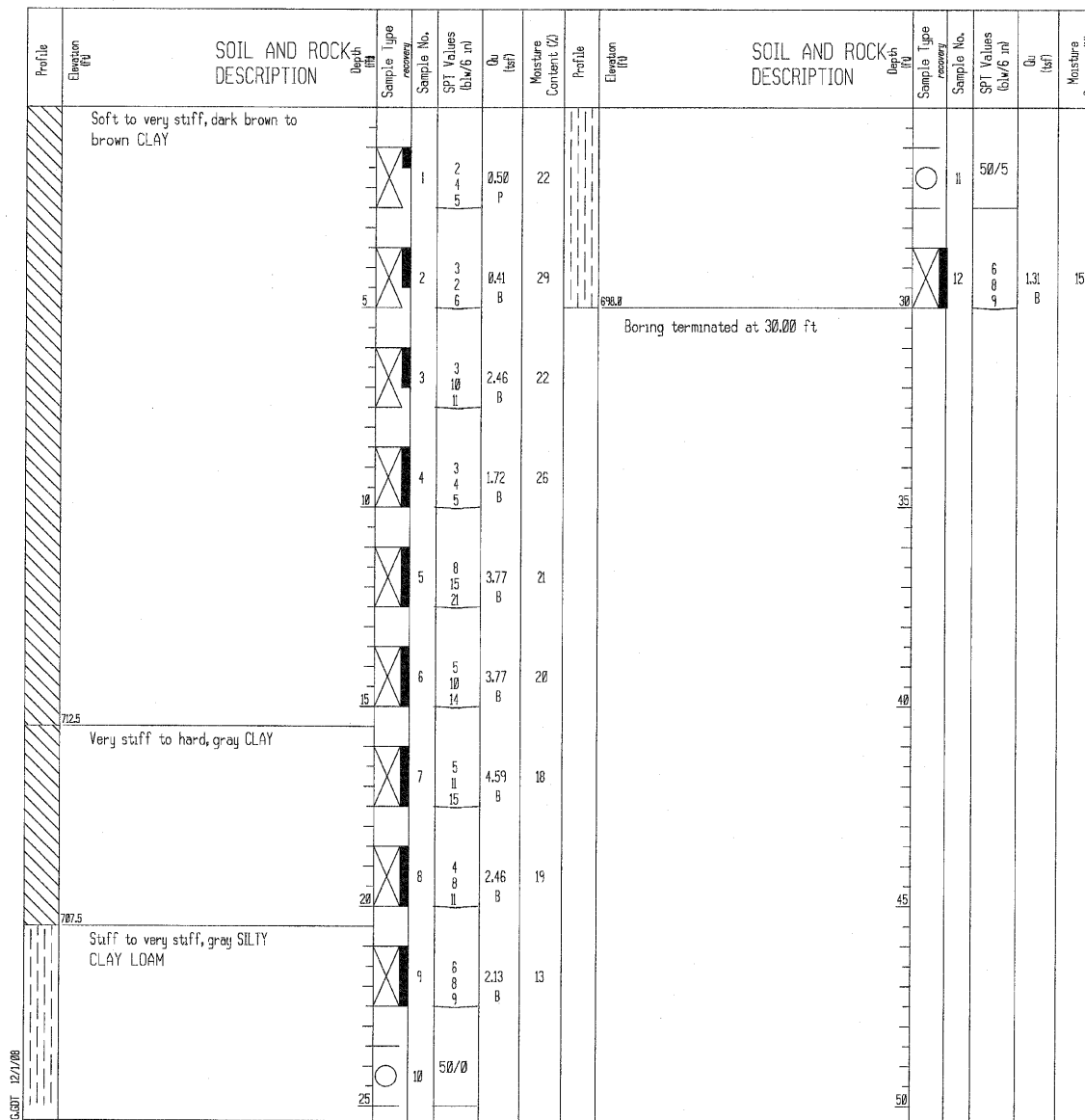
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng@wangeng.com  
1145 N. Main Street  
Lombard, IL 60148  
Telephone: (630) 953-9928  
Fax: (630) 953-9938

**BORING LOG BS-123**  
WEI Job No.: 301-01-02  
Client: DLZ - Brighton Engineering, Inc.  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21

Datum: NGVD  
Elevation: 727.96 ft  
North: 1763135.96 ft  
East: 1113839.61 ft  
Station: 387+35.08  
Offset: 72.00

Page 1 of 1



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-20-2005	Complete Drilling	04-20-2005
Drilling Contractor	DLZ	Drill Rig	D-120 TMR
Driller	K&R	Logger	B. Panozzo
Checked by	S. Janowski	Drilling Method	3.25" ID HSB; Boring backfilled upon completion
Drilling Method	3.25" ID HSB; Boring backfilled upon completion		
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	ASP
CHECKED	CDS
DRAWN	BGC
CHECKED	ASP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**CULVERT 'L'  
BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479

**BORING LOG BS-124** Page 1 of 1

Wang Engineering, Inc.  
1145 N. Main Street  
Lombard, IL 60148  
Telephone: (630) 953-9928  
Fax: (630) 953-9938

WEI Job No.: 301-01-02  
Client: DLZ - Brighton Engineering, Inc.  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 730.54 ft  
North: 1763086.01 ft  
East: 1113840.69 ft  
Station: 387+35.00  
Offset: 0

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (ksf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (ksf)	Moisture Content (%)
723.0	Medium stiff, black to dark brown CLAY							723.5							
	Stiff, brown CLAY	5	X	1	5 7 6	0.75 P	22			5	X	11	5 10 13	1.31 B	16
		10	X							10	X				
		15	X	2	4 6 9	1.07 B	26			15	X	12	4 8 11	0.74 B	16
725.0	Stiff, green CLAY	20	X							20	X				
		25	X	3	3 6 10	1.97 B	24			25	X				
		30	X							30	X				
		35	X	4	8 11 13	4.52 B	19			35	X				
		40	X							40	X				
		45	X	5	5 12 19	4.92 B	19			45	X				
		50	X							50	X				
		55	X	6	4 12 18	6.56 B	20			55	X				
		60	X							60	X				
		65	X	7	5 11 13	2.30 B	19			65	X				
725	Stiff, gray SILTY CLAY LOAM	70	X							70	X				
		75	X	8	3 8 12	1.97 B	15			75	X				
730	Medium dense, gray SANDY LOAM	80	X							80	X				
		85	X	9	3 8 7	NP	15			85	X				
735	Medium stiff to stiff, gray SILTY CLAY LOAM	90	X							90	X				
		95	X	10	2 4 9	1.89 B	14			95	X				

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-20-2005	Complete Drilling	04-20-2005
Drilling Contractor	DLZ	Drill Rig	D-120 TMR
Driller	K&R	Logger	B. Panozzo
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	3.25' ID HSA; Boring backfilled upon completion		
While Drilling	∇	20.50 ft	
At Completion of Drilling	∇	14.00 ft	
Depth to Water	∇	NA	

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**BORING LOG BS-125** Page 1 of 1

Wang Engineering, Inc.  
1145 N. Main Street  
Lombard, IL 60148  
Telephone: (630) 953-9928  
Fax: (630) 953-9938

WEI Job No.: 301-01-02  
Client: DLZ - Brighton Engineering, Inc.  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 730.76 ft  
North: 1763049.98 ft  
East: 1113818.12 ft  
Station: 387+35.00  
Offset: 56.00

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (ksf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type recovery	Sample No.	SPT Values (blows/6 in)	Qu (ksf)	Moisture Content (%)
722.0	Very stiff, brown CLAY							722.5							
	--FILL--	5	X	1	5 10 12	3.50 P	17			5	X	11	5 10 14	1.23 B	16
		10	X							10	X				
		15	X	2	5 5 7	0.57 B	18			15	X	12	5 11 14	1.56 B	16
723	Medium stiff, black and green, mottled CLAY	20	X							20	X				
		25	X	3	3 5 8	0.41 B	18			25	X				
		30	X							30	X				
		35	X	4	7 13 16	4.51 B	18			35	X				
		40	X							40	X				
		45	X	5	4 11 17	4.51 B	19			45	X				
		50	X							50	X				
		55	X	6	4 16 19	5.33 B	19			55	X				
		60	X							60	X				
		65	X	7	8 13 15	4.50 P	20			65	X				
726	Medium dense, brown SANDY LOAM	70	X							70	X				
		75	X	8	4 8 8	NP	27			75	X				
730.3	Stiff, gray SILTY CLAY LOAM	80	X							80	X				
		85	X	9	12 11 11	1.07 B	13			85	X				
		90	X							90	X				
		95	X	10	5 9 11	1.64 B	15			95	X				

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	04-20-2005	Complete Drilling	04-20-2005
Drilling Contractor	DLZ	Drill Rig	D-120 TMR
Driller	K&R	Logger	B. Panozzo
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	3.25' ID HSA; Boring backfilled upon completion		
While Drilling	∇	18.50 ft	
At Completion of Drilling	∇	14.00 ft	
Depth to Water	∇	NA	

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	ASP
CHECKED	CDS
DRAWN	BGC
CHECKED	ASP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**CULVERT 'L'**  
**BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 387+33.00  
WILL COUNTY  
STRUCTURE NUMBER 099-C017

BENCH MARK: BM 214  
 STA. 208+46.38, 31.5' LT. ELEV. 734.63  
 SET RAILROAD SPIKE IN SOUTH FACE OF  
 SEVENTH POWER POLE EAST OF SCHOOLHOUSE  
 ROAD, NORTH SIDE OF ROUTE 30.

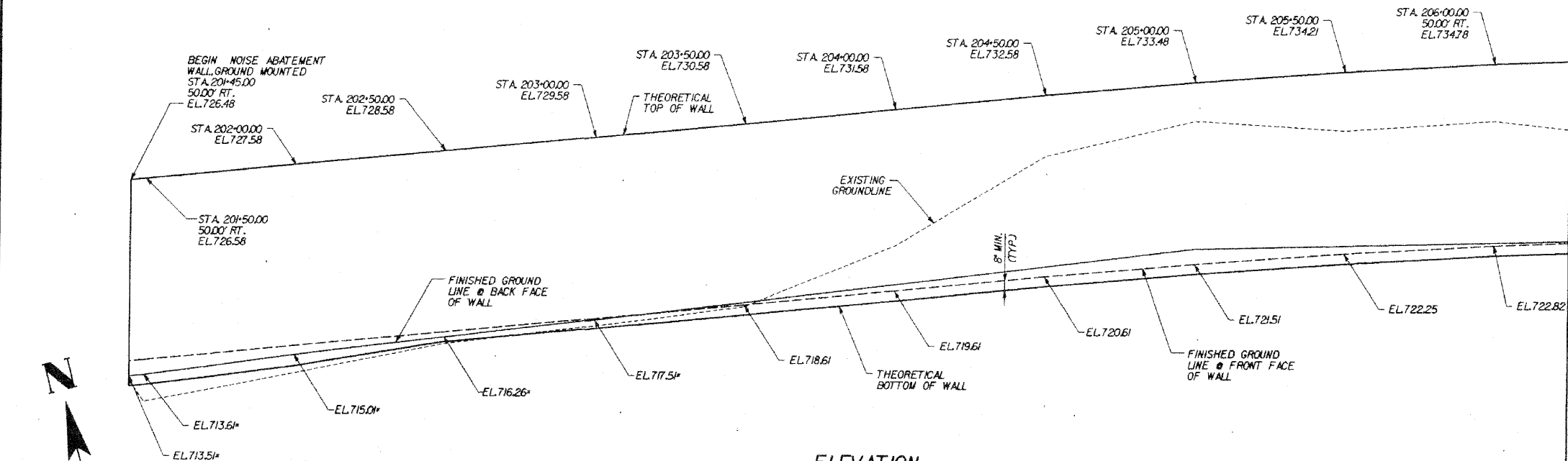
EXISTING STRUCTURE: NONE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

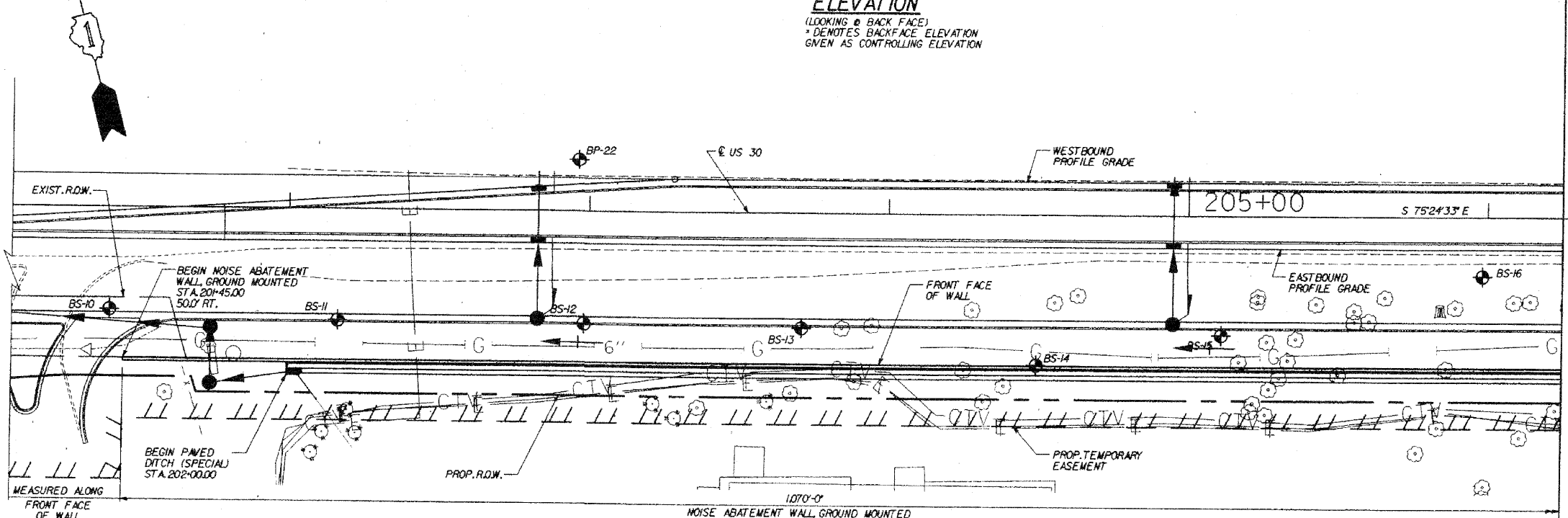
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	727
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

\* SECT. 12 & 13 WRS-3  
 \* CONTRACT NO. 8479

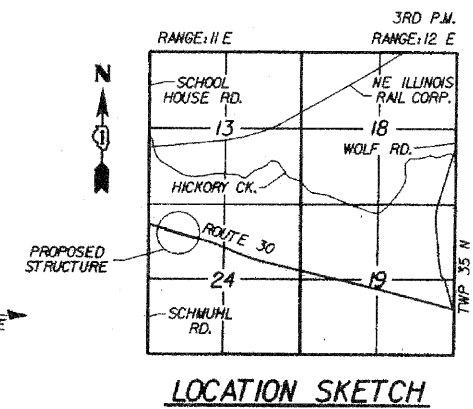
SHEET NO. 1  
 11 SHEETS



TOTAL BILL OF MATERIAL		
ITEM	UNIT	QUANTITY
PAVED DITCH (SPECIAL)	FOOT	950
NOISE ABATEMENT WALL GROUND MOUNTED	SQ. FT.	13,742



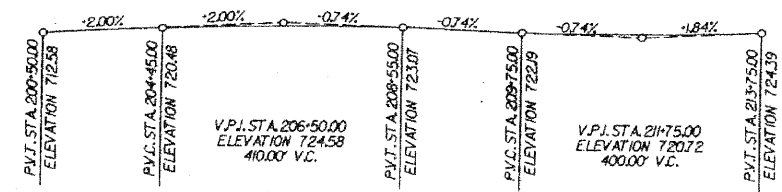
MATCH LINE STA. 206+25



Wayne A. Trix  
 April 11-20-10

NOTE:  
 STATIONS AND OFFSETS ARE  
 FROM @ US 30 TO THE FRONT  
 FACE OF WALL.

**DESIGN SPECIFICATIONS**  
 2002 AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES



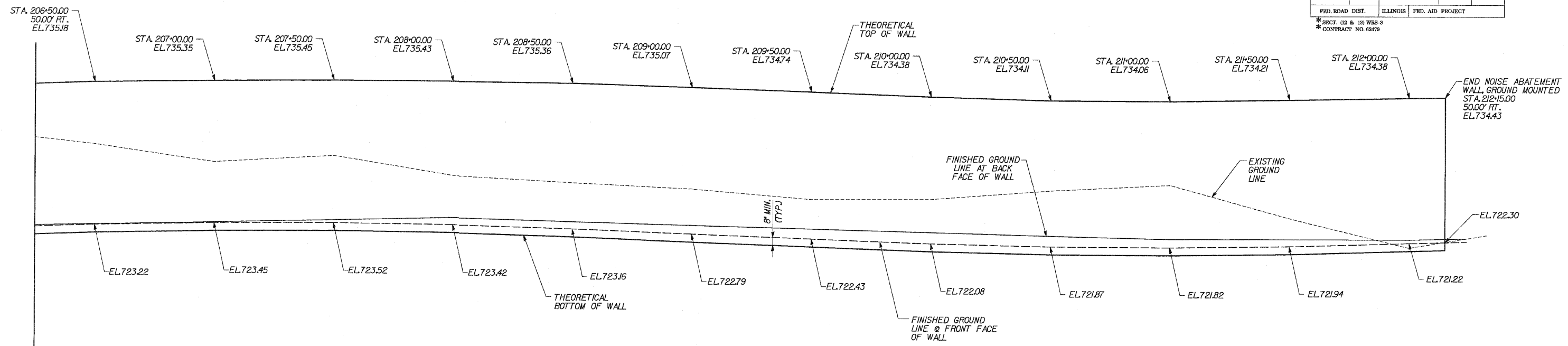
DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WBP

REVISIONS	
NAME	DATE

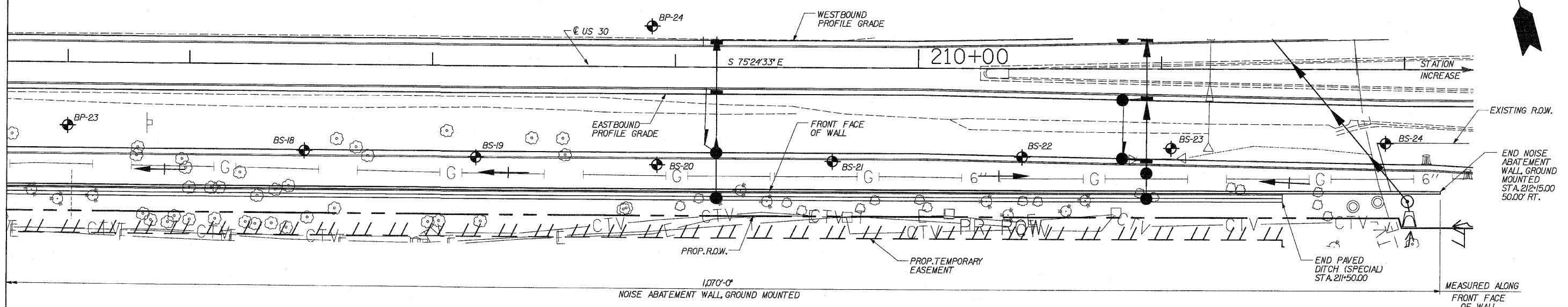
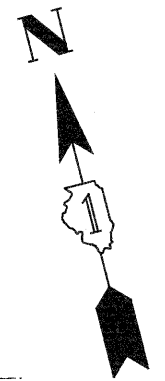
**DLZ** 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005

**NOISE WALL A  
 GENERAL PLAN I**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION 12 & 13 WRS-3  
 STATION 201+45.00 TO 212+15.00  
 WILL COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	728
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		



MATCH LINE STA. 206+25



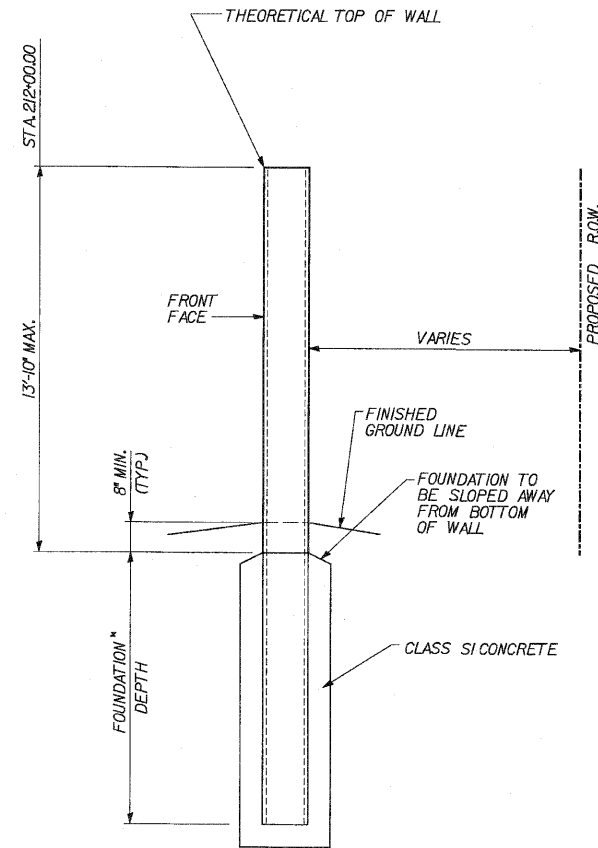
DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

NOTE:  
STATIONS AND OFFSETS ARE FROM @ US 30 TO THE FRONT FACE OF WALL.

REVISIONS	
NAME	DATE

**DLZ** DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

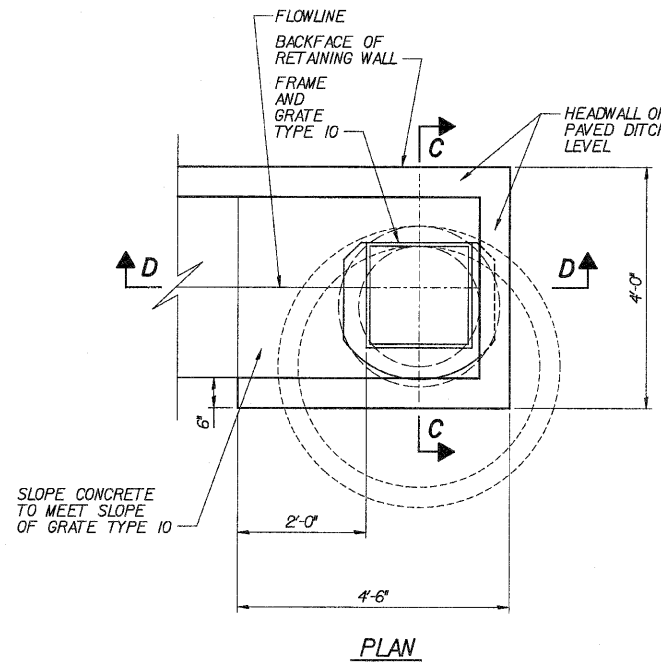
**NOISE WALL A  
GENERAL PLAN II**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY



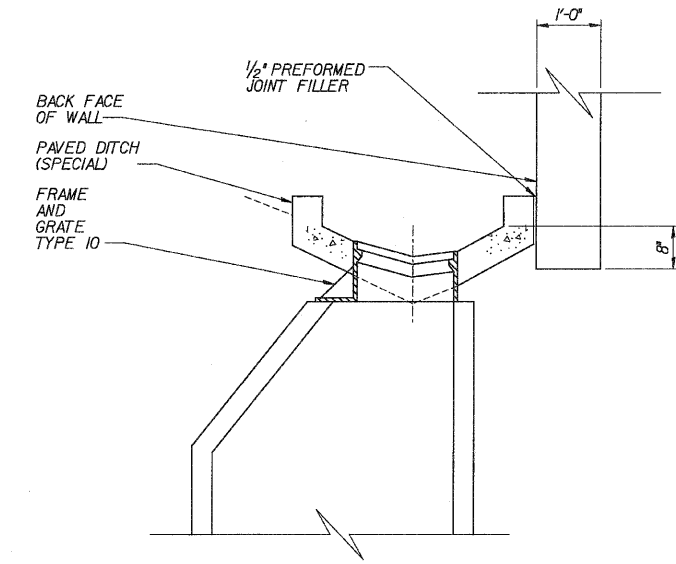
**TYPICAL SECTION THROUGH NOISE ABATEMENT WALL, GROUND MOUNTED**

\* FOUNDATION DEPTH TO BE DETERMINED BY CONTRACTOR.

NOTE: LOW CLEARANCE EQUIPMENT SHOULD BE USED FOR THE INSTALLATION OF THE NOISE WALLS AND THE CONTRACTOR SHOULD COORDINATE THE INSTALLATION WITH THE UTILITY COMPANIES

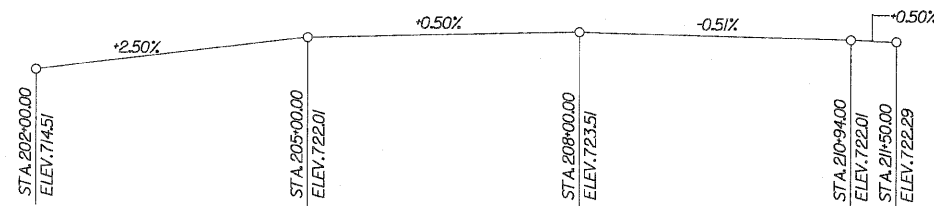


**PLAN**

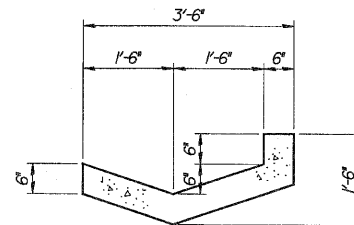


**ELEVATION**

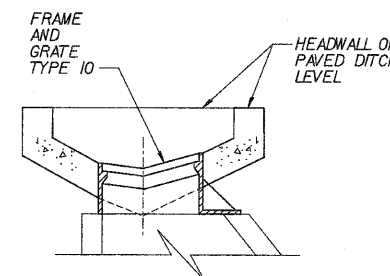
**DRAINAGE DETAIL**



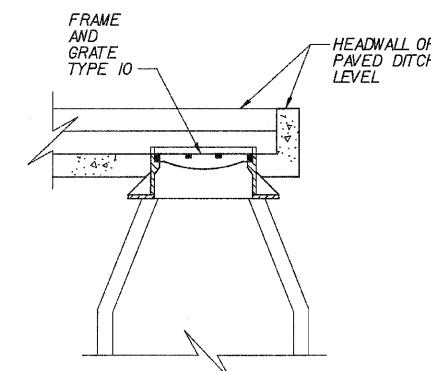
**FLOWLINE OF PAVED DITCH (SPECIAL)**



**PAVED DITCH (SPECIAL)**



**SECTION C-C**



**SECTION D-D**

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

**DLZ** DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**NOISE WALL A  
GENERAL DETAILS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-010** Page 1 of 1

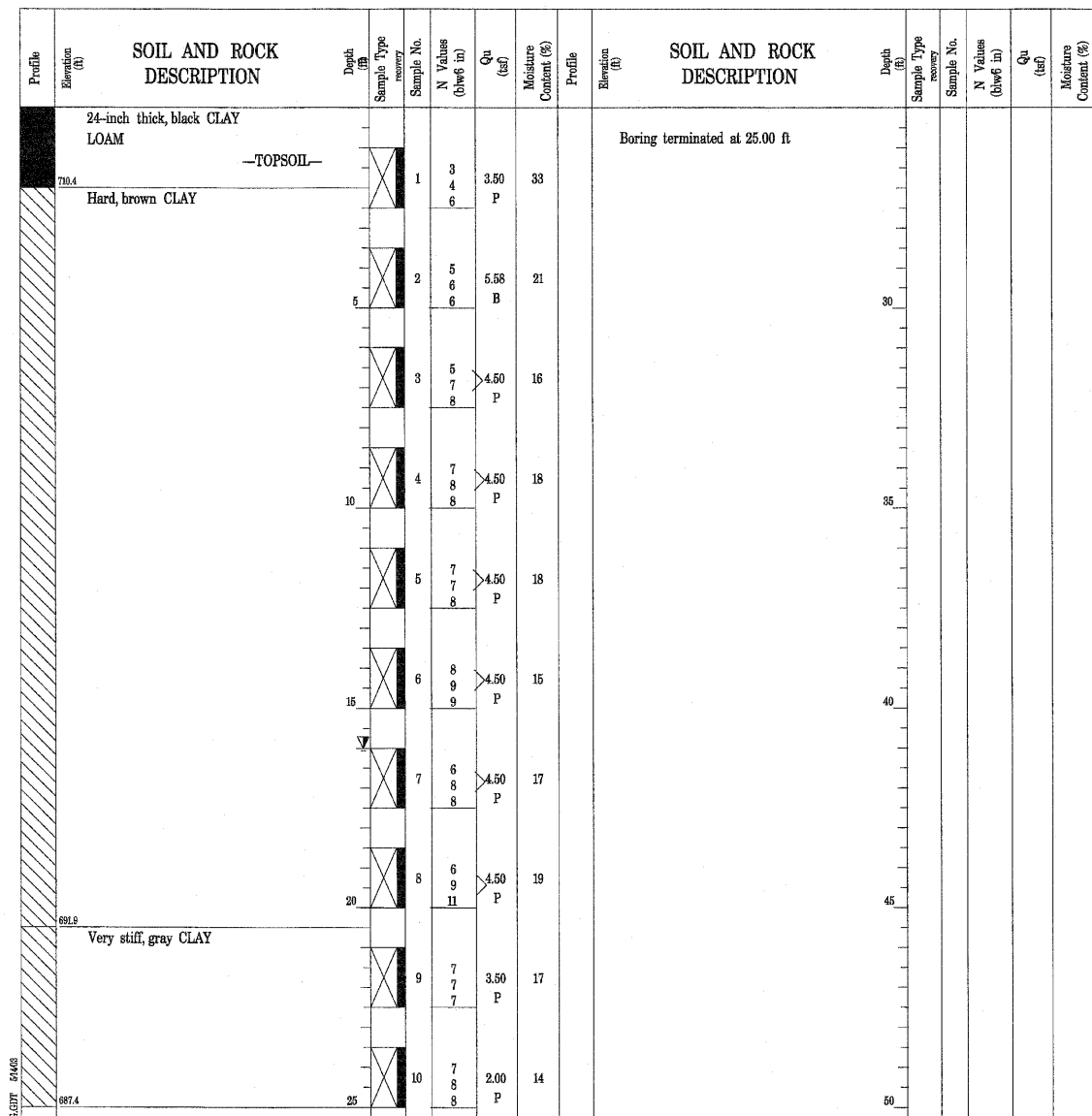
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 712.38 ft  
North: 1764479.54 ft  
East: 1095846.51 ft  
Station: 201+40.42  
Offset: 33.96 RT

Client: Brighton Engineering Company

Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02

Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-27-2003	Complete Drilling	02-27-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	∇	DRY	
Driller	C&J	Logger	E. Oancea	Time After Drilling	72 hours		
Drilling Method	3.25" ID HSA; Boring backfilled with bentonite			Depth to Water	∇ 16.00 ft		
	chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
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Fax: 630 458-0900

**BORING LOG BS-011** Page 1 of 1

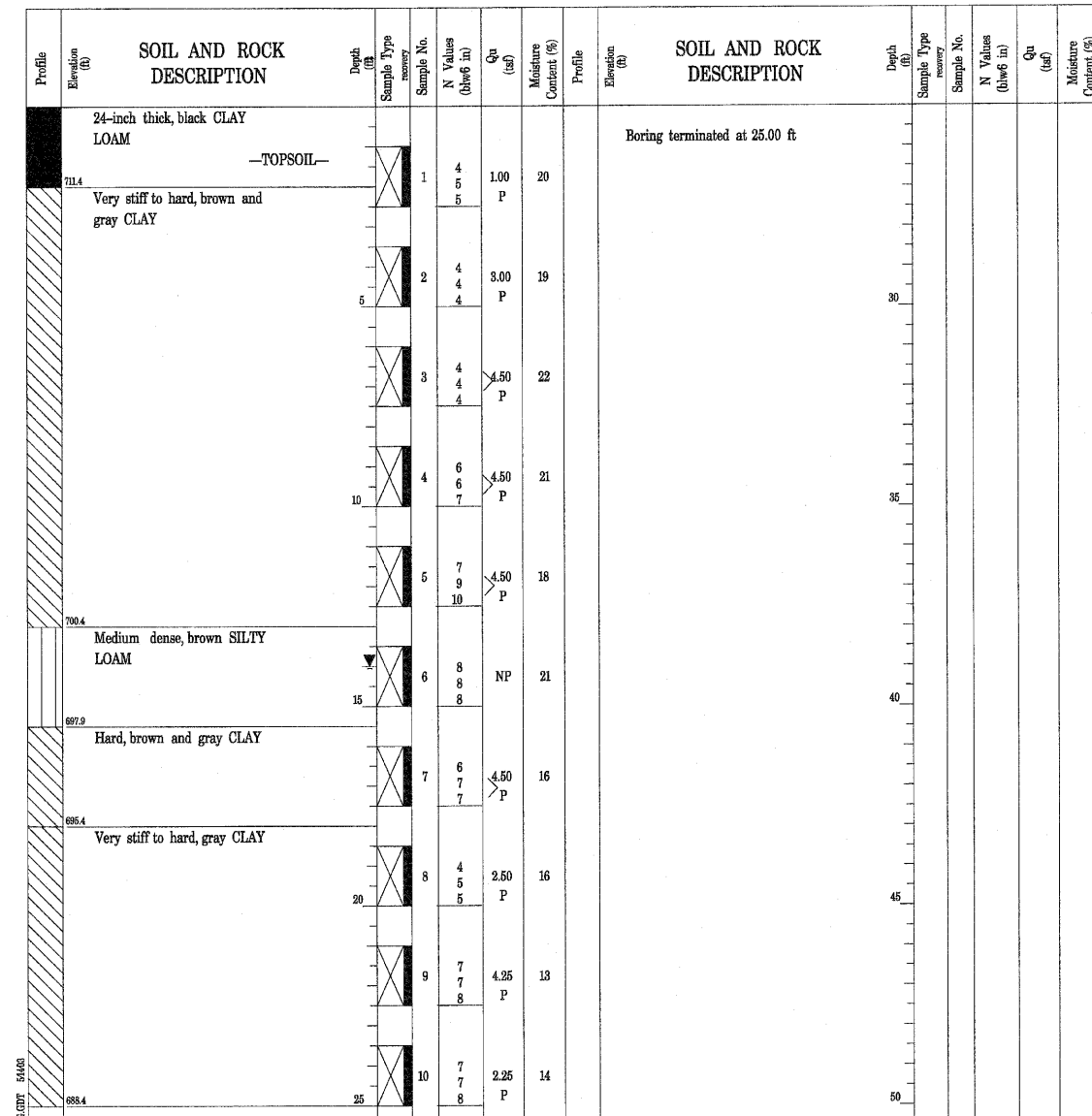
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 713.43 ft  
North: 1764457.46 ft  
East: 1096919.41 ft  
Station: 202+16.54  
Offset: 36.95 RT

Client: Brighton Engineering Company

Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02

Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-27-2003	Complete Drilling	02-27-2003	While Drilling	∇	14.00 ft	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	NA		
Driller	C&J	Logger	E. Oancea	Time After Drilling	72 hours		
Drilling Method	3.25" ID HSA; Boring backfilled with bentonite			Depth to Water	∇ 14.00 ft		
	chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-012**  
WEI Job No.: 301-01-01

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 714.14 ft  
North: 1764436.49 ft  
East: 1095998.63 ft  
Station: 202+98.48  
Offset: 37.27 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/in)	Qu (tsf)	Moisture Content (%)
	719.6	18-inch thick, black CLAY LOAM ---TOPSOIL---			1	4 4 5	3.50	26			Boring terminated at 25.00 ft						
		Stiff to hard, brown CLAY	5		2	2 2 2	1.00	27				30					
			10		3	2 3 4	1.00	19				35					
			15		4	5 5 6	4.00	17				40					
	708.6	Very stiff to hard, gray CLAY to SILTY CLAY	20		5	6 7 8	4.50	14				45					
			25		6	7 10 11	4.50	12				50					
			30		7	7 8 10	3.50	14									
			35		8	4 5 7	3.50	15									
			40		9	5 6 8	4.25	17									
			45		10	6 8 10	2.00	13									
	699.1		50														

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-27-2003	Complete Drilling	02-27-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	E. Oancea
Checked by	S. Janowski	Time After Drilling	72 hours
Drilling Method	3.25" ID HSA; Boring backfilled with bentonite chips upon completion	Depth to Water	4.50 ft
		While Drilling: <input checked="" type="checkbox"/> DRY	
		At Completion of Drilling: <input checked="" type="checkbox"/> DRY	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-013**  
WEI Job No.: 301-01-01

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 718.22 ft  
North: 1764417.37 ft  
East: 1096068.72 ft  
Station: 203+71.13  
Offset: 38.11 RT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/in)	Qu (tsf)	Moisture Content (%)
	717.2	12-inch thick, black CLAY LOAM ---TOPSOIL---			1	4 5 7	4.50	23			Boring terminated at 25.00 ft						
		Stiff to hard, brown CLAY	5		2	5 6 6	4.50	19				30					
			10		3	4 5 5	1.50	23				35					
			15		4	5 7 9	4.00	17				40					
	708.0	Very stiff to hard, gray CLAY to SILTY CLAY	20		5	6 6 8	3.50	14				45					
			25		6	6 7 9	4.50	13				50					
			30		7	8 8 8	4.50	13									
			35		8	7 7 8	4.50	13									
			40		9	5 6 6	3.00	14									
			45		10	6 7 7	3.50	16									
	699.2		50														

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-27-2003	Complete Drilling	02-27-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	E. Oancea
Checked by	S. Janowski	Time After Drilling	72 hours
Drilling Method	3.25" ID HSA; Boring backfilled with bentonite chips upon completion	Depth to Water	12.00 ft
		While Drilling: <input checked="" type="checkbox"/> DRY	
		At Completion of Drilling: <input checked="" type="checkbox"/> DRY	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

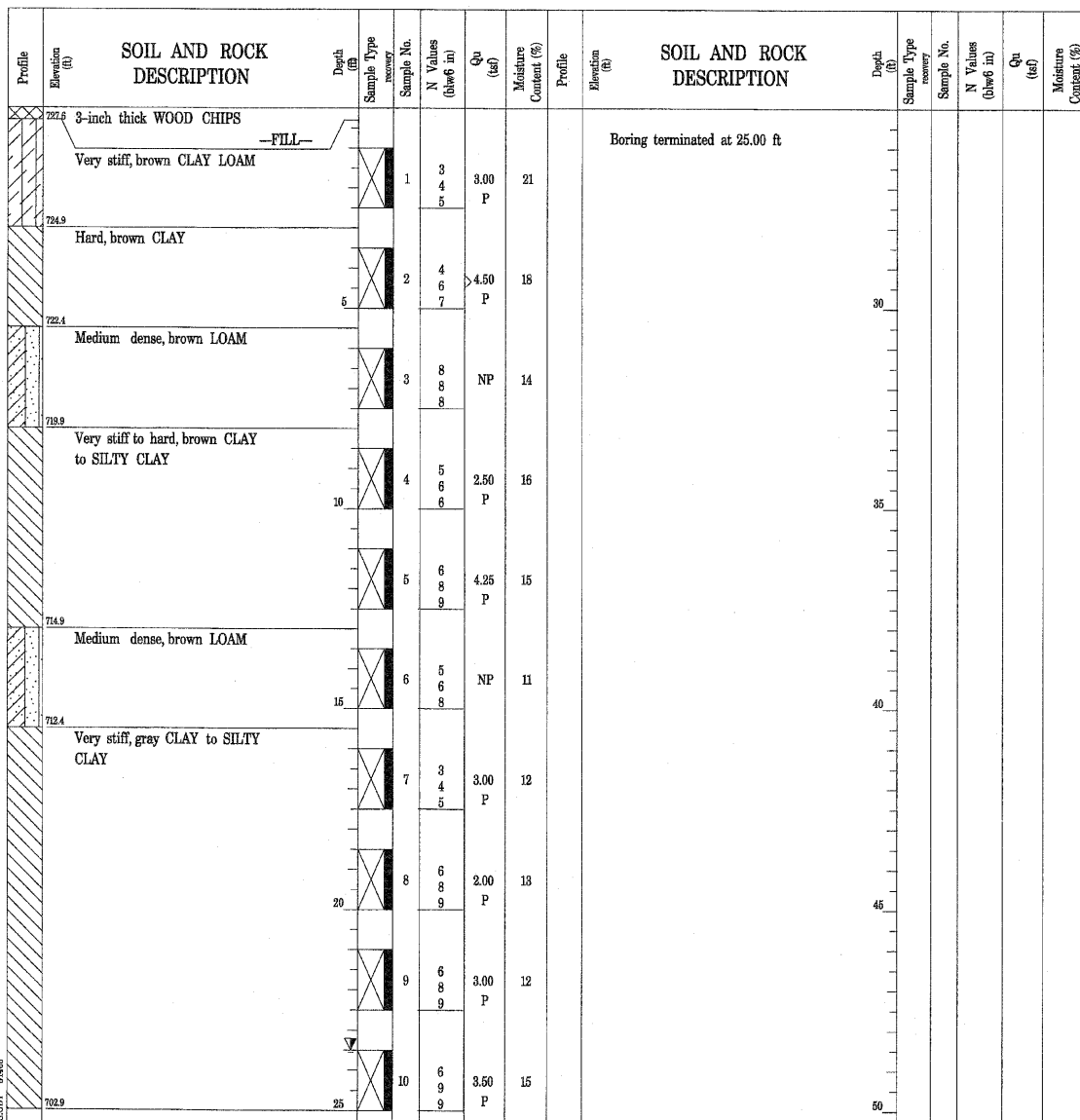


**BORING LOG BS-014** Page 1 of 1

Wang Engineering, INC.  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E; Sec 22-24, R12E; Sec 19-21

Datum: NGVD  
Elevation: 727.94 ft  
North: 1764386.37 ft  
East: 1096141.68 ft  
Station: 204+49.55  
Offset: 49.73 RT



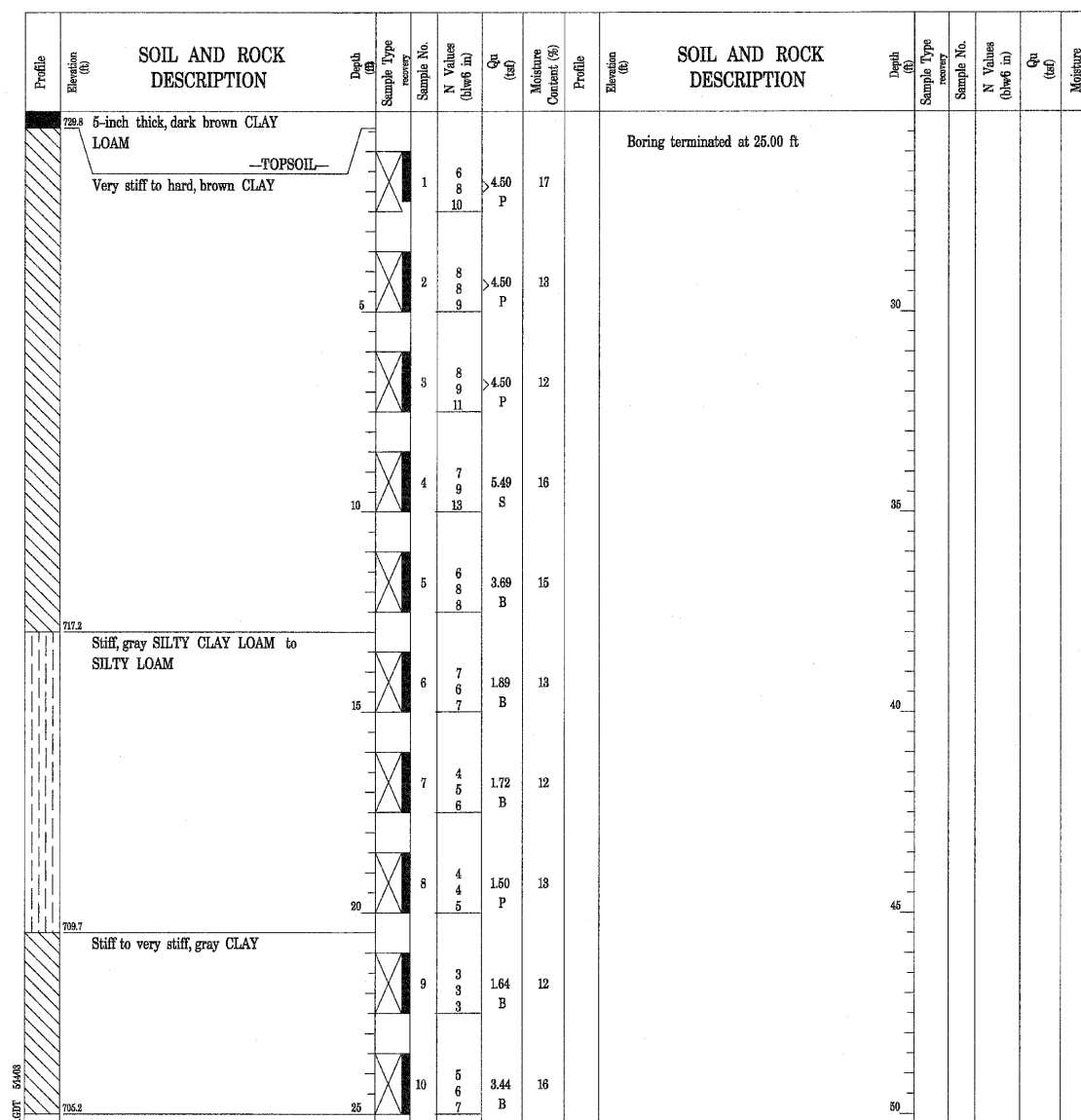
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-27-2003	Complete Drilling	02-27-2003	While Drilling	DRY		
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	DRY		
Driller	C&J	Logger	E. Oancea	Time After Drilling	72 hours		
Drilling Method	3.25" ID HSA; Boring backfilled with bentonite chips upon completion			Depth to Water	23.50 ft		
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

**BORING LOG BS-015** Page 1 of 1

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WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E; Sec 22-24, R12E; Sec 19-21

Datum: NGVD  
Elevation: 730.22 ft  
North: 1764380.66 ft  
East: 1096203.87 ft  
Station: 205+11.17  
Offset: 39.57 RT



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-28-2003	Complete Drilling	02-28-2003	While Drilling	DRY		
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	DRY		
Driller	C&J	Logger	H. Suhail	Time After Drilling	72 hours		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	DRY ft		
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

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**BORING LOG BS-016**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 723.78 ft  
North: 1764377.89 ft  
East: 1096293.23 ft  
Station: 205+98.34  
Offset: 19.74 RT

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)
	723.3	6-inch thick CRUSHED STONE --SHOULDER AGGREGATE-- Medium dense, brown and gray SILTY LOAM	0		1	5 6 7	NP	22			Boring terminated at 25.00 ft						
	720.8	Loose to medium dense, brown and gray LOAM	5		2	3 3 3	NP	17				30					
					3	5 5 6	NP	16									
	715.8	Very stiff, brown and gray CLAY to SILTY CLAY	10		4	5 7 7	2.21 S	13				35					
	713.2	Very stiff to hard, gray CLAY to SILTY CLAY	15		5	5 5 6	3.77 B	15									
			20		6	3 4 4	3.36 B	15				40					
					7	4 5 5	2.79 B	12									
					8	4 4 5	4.35 B	15				45					
					9	5 7 7	4.67 B	16									
					10	4 5 5	2.30 B	12				50					

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-05-2003	Complete Drilling	03-05-2003	While Drilling	∇ DRY		
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	∇ DRY		
Driller	C&J	Logger	H. Suhail	Time After Drilling	24 hours		
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite				
chips upon completion				Depth to Water	∇ 19.50 ft		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

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**BORING LOG BS-018**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 726.22 ft  
North: 1764325.26 ft  
East: 1096433.48 ft  
Station: 207+47.33  
Offset: 35.32 RT

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)
	722.2	36-inch thick, dark brown CLAY --TOPSOIL--	0		1	5 7 7	>4.50 P	20									
	722.2	Very stiff to hard, brown and gray CLAY	5		2	8 8 8	7.87 S	17				30					
					3	7 7 8	3.85 S	14									
	718.2	Medium dense, brown LOAM	10		4	7 8 9	NP	14				35					
					5	7 7 8	NP	12									
	713.2	Very stiff, gray CLAY to SILTY CLAY	15		6	6 7 7	2.87 B	12				40					
					7	5 6 7	2.62 B	12									
	708.2	Medium dense, gray LOAM	20		8	6 7 8	NP	10				45					
	705.7	Very stiff, gray CLAY to SILTY CLAY			9	5 6 8	2.50 P	14									
					10	5 6 6	3.85 B	14				50					

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-05-2003	Complete Drilling	03-05-2003	While Drilling	∇ DRY		
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	∇ DRY		
Driller	C&J	Logger	H. Suhail	Time After Drilling	24 hours		
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite				
chips upon completion				Depth to Water	∇ DRY ft		
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62478

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**BORING LOG BS-019**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 724.92 ft  
North: 1784305.40 ft  
East: 1096501.28 ft  
Station: 208+17.95  
Offset: 37.44 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
721.9	36-inch thick, dark brown CLAY LOAM --TOPSOIL--	0	X	1	3 4 6	2.00	27	694.9		0	X	11	3 5 7	3.03	13
718.7	Medium dense, brown LOAM	5	X	2	5 5 5	NP	15	30	Boring terminated at 30.00 ft	5	X	12	6 7 8	7.13	16
718.7	Stiff to hard, brown and gray CLAY	10	X	3	3 3 3	1.80	28	35		10	X	4	6 7 7	6.56	21
718.4	Very stiff to hard, gray CLAY to SILTY CLAY	15	X	6	5 7 7	4.51	17	40		15	X	6	5 6 8	4.59	20
		20	X	8	5 6 8	4.59	20	45		20	X	8	4 5 6	3.18	16
		25	X	10	4 5 6	3.28	15	50		25	X	10	4 5 6	3.28	15

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-05-2003	Complete Drilling	03-05-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	24 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	23.50 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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**BORING LOG BS-020**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 723.33 ft  
North: 1784284.06 ft  
East: 1096572.87 ft  
Station: 208+92.6  
Offset: 40.05 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
722.6	9-inch thick, dark brown CLAY LOAM --TOPSOIL--	0	X	1	3 3 4	2.00	26	698.3	Boring terminated at 25.00 ft	0	X	11	3 5 7	3.03	13
720.3	Very stiff to hard, brown and gray CLAY	5	X	2	5 5 5	3.44	19	30		5	X	12	6 7 8	7.13	16
722.8	Very stiff to hard, gray CLAY to SILTY CLAY	10	X	3	6 7 9	4.50	14	35		10	X	4	4 6 7	3.20	15
		15	X	6	5 6 8	4.35	20	40		15	X	6	5 6 8	4.35	20
		20	X	8	4 4 4	3.36	21	45		20	X	8	4 5 7	3.53	20
		25	X	10	5 5 6	3.69	17	50		25	X	10	6 6 6	4.43	12

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-28-2003	Complete Drilling	02-28-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	72 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	9.00 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

**BORING LOG BS-021** Page 1 of 1

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WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E; Sec 22-24, R12E; Sec 19-21

Datum: NGVD  
Elevation: 721.95 ft  
North: 1764267.52 ft  
East: 1096643.13 ft  
Station: 209+64.77  
Offset: 38.35 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qc (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qc (tsf)	Moisture Content (%)
720.5	17-inch thick, dark brown CLAY LOAM ---TOPSOIL---								Boring terminated at 25.00 ft						
719.6	Very stiff, brown CLAY	1		3 3 4	2.00 P	24									
719.0	Loose, brown LOAM	2		2 2 2	NP	22									
714.0	Very stiff, brown CLAY	3		2 2 3	NP	20									
711.5	Very stiff to hard, gray CLAY to SILTY CLAY	4		5 5 6	3.44 B	14									
		5		6 8 10	NA	13									
		6		7 7 11	5.08 B	18									
		7		7 9 11	5.17 B	18									
		8		6 7 9	3.69 B	12									
		9		3 3 3	2.71 B	15									
		10		7 5 6	3.61 B	16									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-28-2003	Complete Drilling	02-28-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	DRY	
Driller	C&J	Logger	H. Suhail	Time After Drilling		72 hours	
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	▽	4.50 ft	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

**BORING LOG BS-022** Page 1 of 1

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Telephone: 630 458-0700  
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WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E; Sec 22-24, R12E; Sec 19-21

Datum: NGVD  
Elevation: 720.21 ft  
North: 1764249.97 ft  
East: 1096719.12 ft  
Station: 210+42.73  
Offset: 36.17 RT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qc (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qc (tsf)	Moisture Content (%)
718.7	18-inch thick, dark brown CLAY LOAM ---TOPSOIL---								Boring terminated at 25.00 ft						
717.2	Stiff, brown CLAY	1		3 4 4	1.00 P	32									
	Very stiff to hard, brown and gray CLAY	2		2 3 4	2.71 B	23									
		3		4 4 5	4.10 B	22									
		4		6 6 7	6.97 B	21									
709.7	Very stiff to hard, gray CLAY	5		5 6 6	4.92 B	19									
		6		3 4 4	3.03 B	16									
		7		3 3 3	2.38 B	16									
		8		3 4 5	2.46 B	14									
692.7	Loose to medium dense, gray SANDY LOAM	9		4 4 4	NP	12									
695.2		10		4 5 7	NP	10									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-28-2003	Complete Drilling	02-28-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	DRY	
Driller	C&J	Logger	H. Suhail	Time After Drilling		72 hours	
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	▽	18.50 ft	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

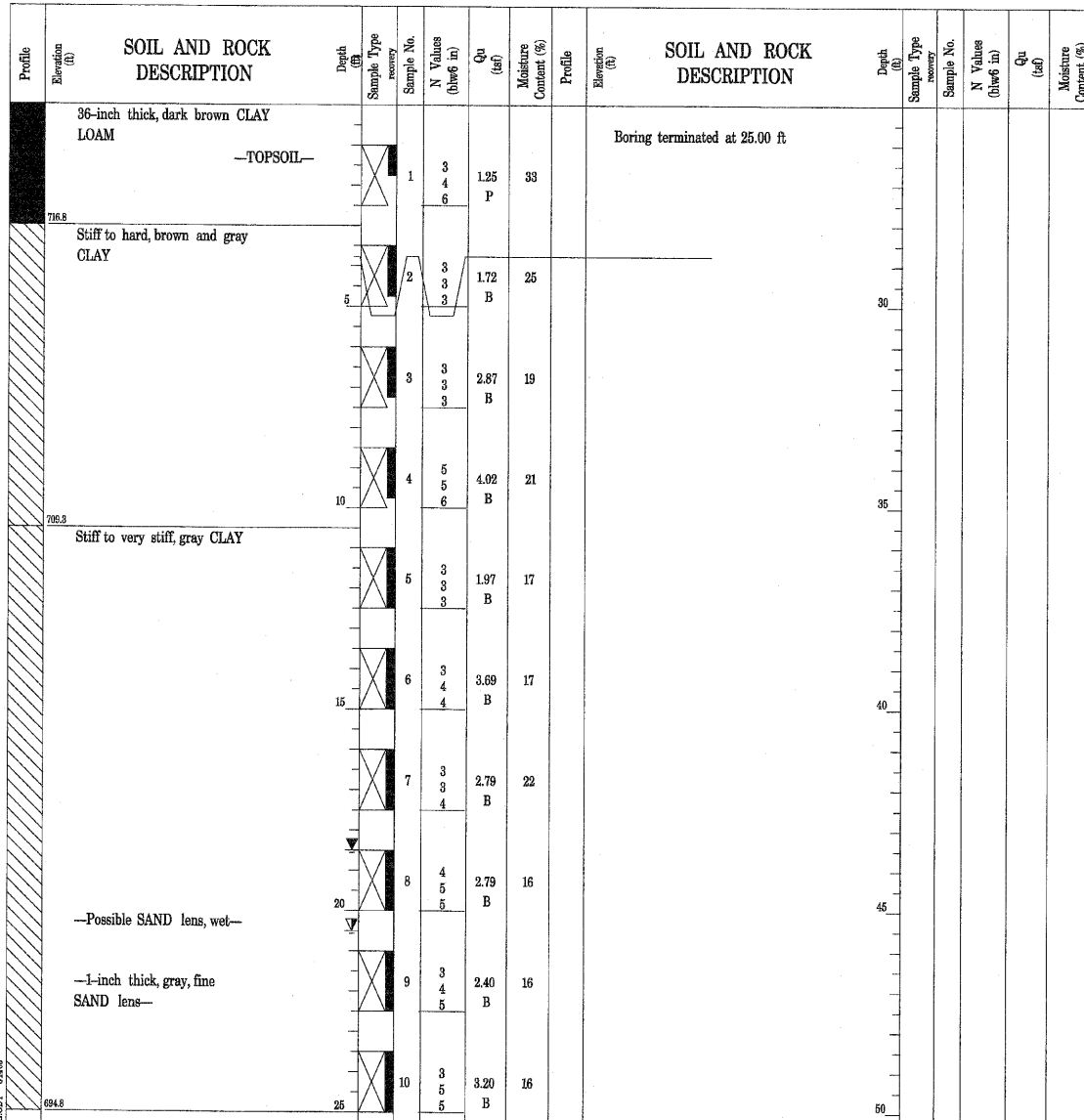
**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
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Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-023**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 719.84 ft  
North: 1764238.11 ft  
East: 1096779.45 ft  
Station: 211+4.10  
Offset: 32.45 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Page 1 of 1



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-28-2003	Complete Drilling	02-28-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	72 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	4.50 ft
		While Drilling	20.50 ft
		At Completion of Drilling	18.50 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

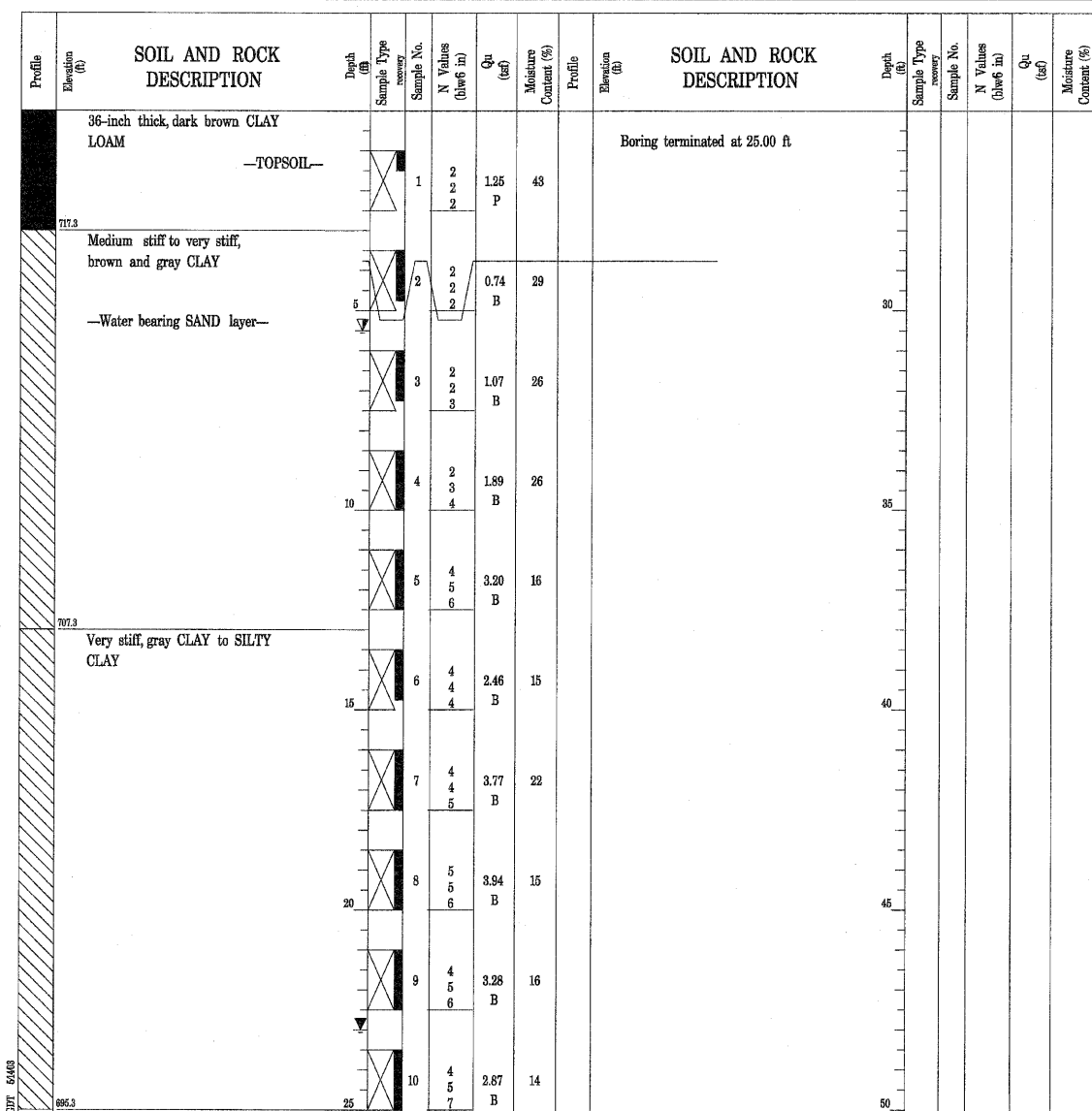
**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
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100 Fairbank Street  
Addison, IL 60101  
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Fax: 630 458-0900

**BORING LOG BS-024**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 720.34 ft  
North: 1764217.96 ft  
East: 1096865.41 ft  
Station: 211+92.36  
Offset: 30.29 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Page 1 of 1



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-28-2003	Complete Drilling	02-28-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	72 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	4.50 ft
		While Drilling	5.50 ft
		At Completion of Drilling	23.00 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP


**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 201+45.00 TO 212+15.00  
WILL COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	737
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479

 Wang Engineering, INC. Consulting Geotechnical and Environmental Engineers wangeng3@wangeng.com 100 Fairbank Street Addison, IL 60101 Telephone: 630 458-0700 Fax: 630 458-0900	<b>BORING LOG BP-023</b> WEI Job No.: 301-01-01		Page 1 of 1
	Client	Brighton Engineering Company	
	Project	GEOT - US. 30, Will Co, IL, IDOT D-91-219-02	
	Location	T35N, R11E, Sec 22-24, R12E, Sec 19-21	
		Datum: NGVD Elevation: 724.31 ft North: 1764359.03 ft East: 1096341.65 ft Station: 206 + 49.95 Offset: 25.77 RT	

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)
724.4	3-inch thick, dark brown CLAY LOAM	19	1	19	>4.50	18							
	---TOPSOIL---	17		10									
	Hard, brown, gravelly CLAY	10		10									
721.5	---FILL---	5	2	5	2.50	21							
	Very stiff, brown CLAY	6		6									
		7		7									
720.3	Medium dense, brown and gray SILTY LOAM	5	3	5		16							
		5		5									
		6		6									
718.3	Hard, brown and gray CLAY	7	4	7	7.46	18							
		9		9									
		11		11									
716.3	Hard, gray CLAY	9	5	9	5.17	14							
		9		9									
		10		10									
714.3		10		10									
	Boring terminated at 10.00 ft												


GENERAL NOTES

Begin Drilling 02-28-2003 Complete Drilling 02-28-2003  
 Drilling Contractor TSC Drill Rig CME 75 TMR  
 Driller C&J Logger H. Suhail Checked by S. Janowski  
 Drilling Method 2.25" SSA; Boring backfilled with bentonite chips upon completion

WATER LEVEL DATA

While Drilling DRY  
 At Completion of Drilling  $\nabla$  DRY  
 Time After Drilling NA  
 Depth to Water  $\nabla$  NA  
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

 **DLZ**  
 DLZ Illinois, Inc.  
 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL A  
BORINGS**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 201+45.00 TO 212+15.00  
 WILL COUNTY

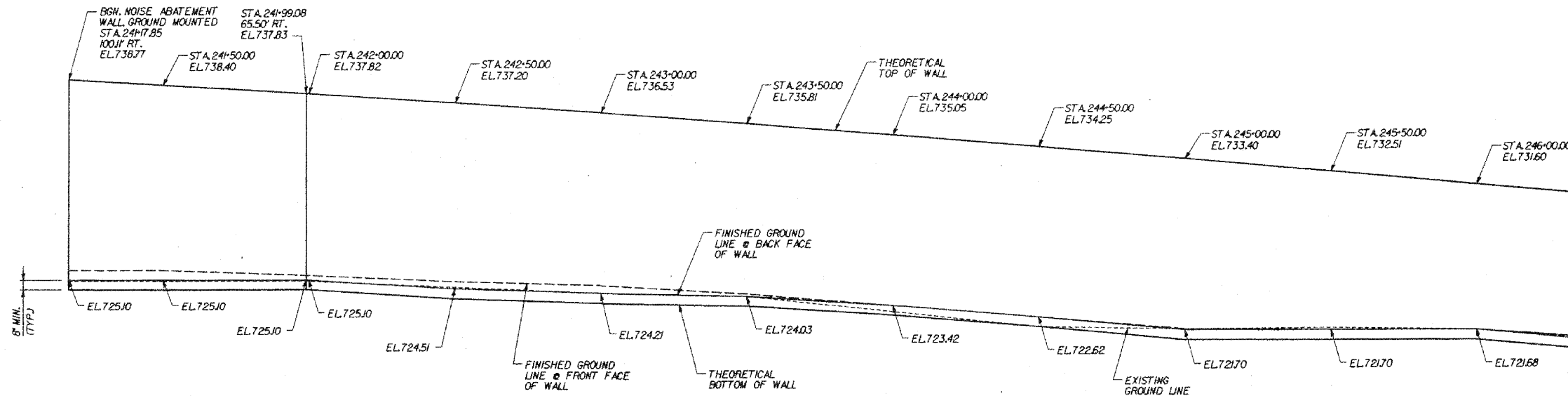
BENCH MARK: BM 219  
 STA. 237+09.69, 41.96' RT, ELEV. 732.20  
 FOUND RAILROAD SPIKE IN SOUTH FACE OF  
 FIRST POWER POLE WEST OF BLUESTONE  
 BAY DRIVE, SOUTH SIDE OF ROUTE 30.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	12	WILL.	1235	738
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1  
 8 SHEETS

EXISTING STRUCTURE: NONE

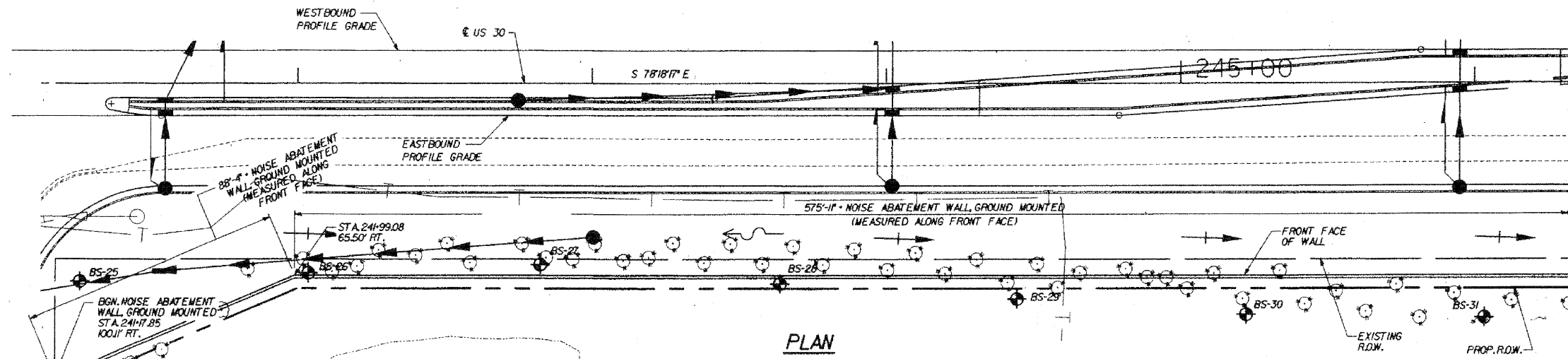


MATCH LINE STA. 246+34

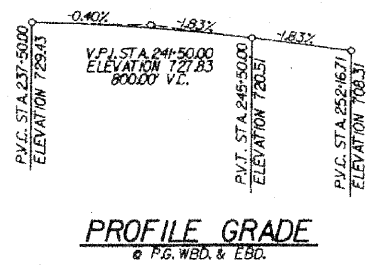
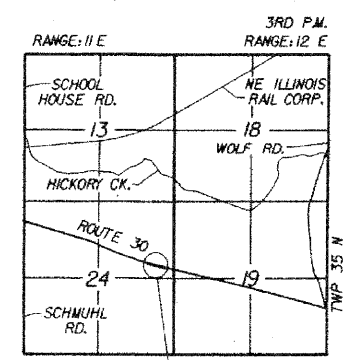
**DESIGN SPECIFICATIONS**  
 AASHTO 2002 SPECIFICATIONS

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
NOISE ABATEMENT WALL, GROUND MOUNTED	SO. FT.	1,972



*Wayne A. Triel*  
 Affian 11-30-10



NOTE:  
 STATIONS & OFFSETS ARE FROM E US 30 TO FRONT FACE OF WALL.

**DLZ** 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005  
 DLZ Group, Inc.

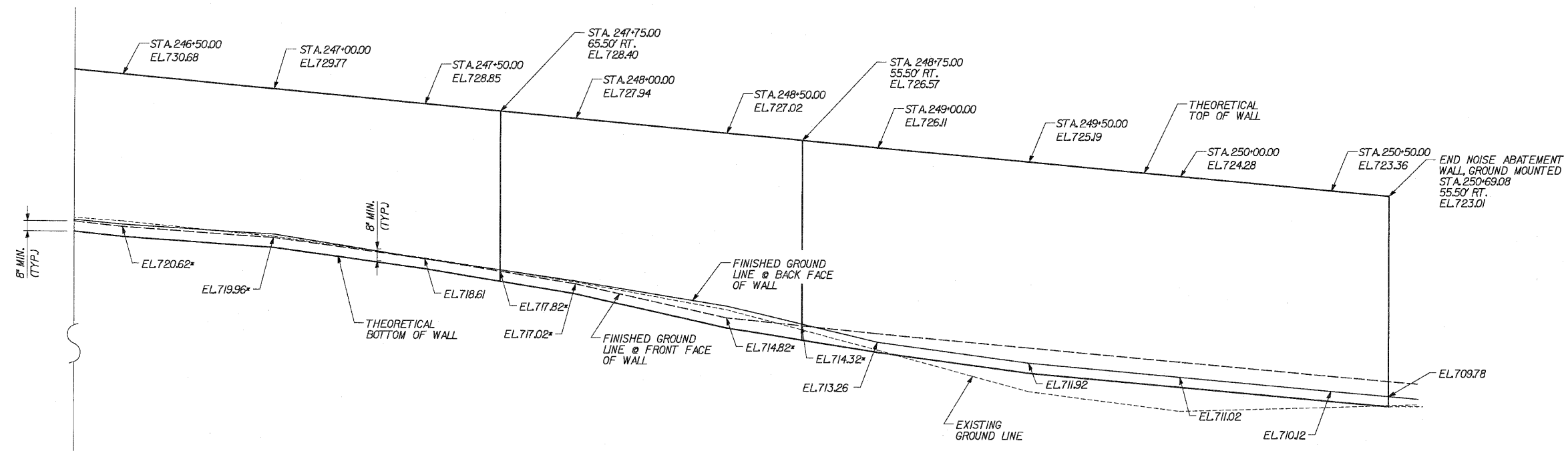
**NOISE WALL B  
 PLAN & ELEVATION**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 241+7.85 TO 250+69.08  
 WILL COUNTY

REVISIONS	
NAME	DATE

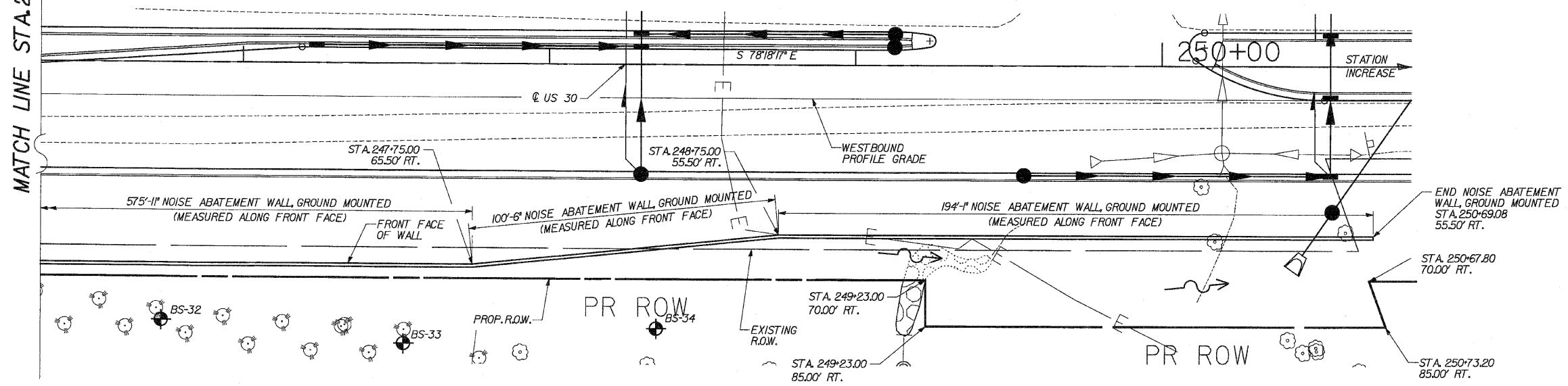
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CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PAP 363	*	WILL	1235	739
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

\* SECT. 12 & 13) WRS-3  
\* CONTRACT NO. 62479



MATCH LINE STA. 246+34



DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

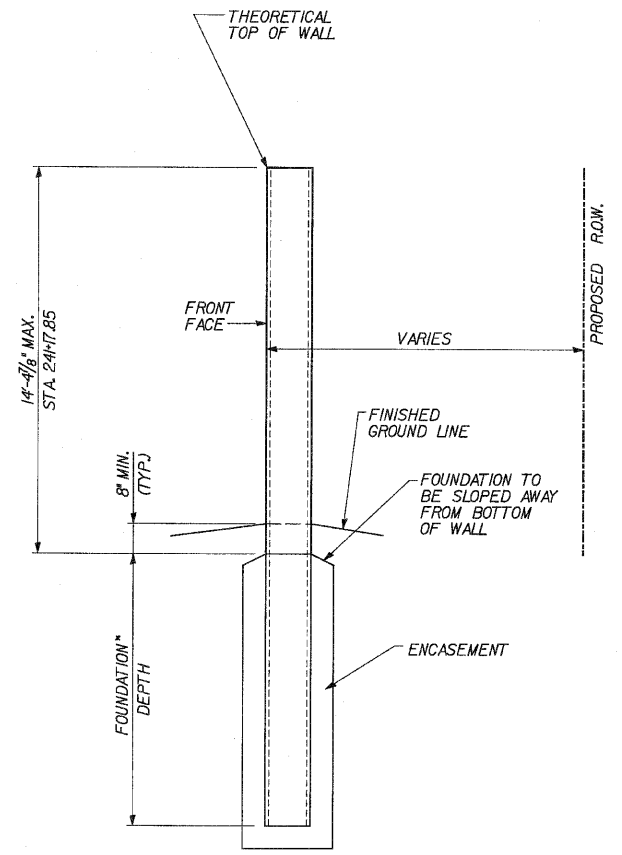
REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL B**  
**PLAN & ELEVATION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 241+7.85 TO 250+69.08  
WILL COUNTY



\* SECT. 12 & 13) WRS-3  
\* CONTRACT NO. 62479



**NOISE ABATEMENT WALL GROUND MOUNTED TYPICAL SECTION**

\* FOUNDATION DEPTH TO BE DETERMINED BY CONTRACTOR.  
NOTE: LOW CLEARANCE EQUIPMENT SHOULD BE USED FOR THE INSTALLATION OF THE NOISE WALLS AND THE CONTRACTOR SHOULD COORDINATE THE INSTALLATION WITH THE UTILITY COMPANIES

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL B  
TYPICAL SECTION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 241+7.85 TO 250+69.08  
WILL COUNTY

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-025**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 724.95 ft  
North: 1763809.73 ft  
East: 1099655.65 ft  
Station: 241 + 26.15  
Offset: 67.51 RT

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)
	724.5	6-inch thick, black CLAY LOAM --TOPSOIL-- Very stiff, brown and black CLAY, trace organic material --FILL--	0		1	3 4 5	2.46 B	15			Boring terminated at 25.00 ft						
	722.0	Very stiff to hard, black and brown CLAY	5		2	3 4 5	>4.50 P	18				30					
	717.0	Stiff, brown and gray, mottled CLAY	10		3	5 6 6	2.62 B	14				35					
	714.5	Stiff to hard, gray CLAY	15		4	4 4 5	1.64 B	18				40					
			20		5	5 6 7	7.22 B	15				45					
			25		6	6 6 7	4.92 B	14				50					
					7	5 7 7	4.10 B	14									
					8	4 5 6	3.12 B	14									
					9	4 5 5	1.97 B	18									
					10	4 5 6	2.46 B	13									

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-20-2003	Complete Drilling	01-20-2003
Drilling Contractor	TSC	Drill Rig	CME 550 ATV
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Drilling Method	2.25" SSA, Boring backfilled with bentonite chips upon completion
While Drilling	▽ 11.50 ft	At Completion of Drilling	▽ 22.50 ft
Time After Drilling	NA	Depth to Water	▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**Wang Engineering, INC.**  
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Addison, IL 60101  
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**BORING LOG BS-026**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 725.39 ft  
North: 1763296.71 ft  
East: 1099732.26 ft  
Station: 242 + 3.80  
Offset: 64.72 RT

Page 1 of 1

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Q <sub>u</sub> (tsf)	Moisture Content (%)
	724.9	6-inch thick, black CLAY LOAM --TOPSOIL-- Very stiff, brown and black CLAY --FILL--	0		1	6 6 7	2.46 B	16			Boring terminated at 25.00 ft						
	722.4	Stiff to hard, brown and gray CLAY	5		2	4 5 7	1.23 B	15				30					
			10		3	3 4 5	1.23 B	27				35					
			15		4	5 6 6	2.71 B	17				40					
			20		5	6 7 8	5.08 B	17				45					
			25		6	5 6 6	5.82 B	15				50					
	706.9	Very stiff to hard, gray CLAY	30		7	6 6 6	5.74 B	15				35					
			35		8	6 6 7	3.69 B	15				40					
	704.9	Very stiff, gray SANDY CLAY LOAM	40		9	7 9 8	3.69 B	11				45					
	704.6	Very stiff, gray CLAY	45		10	6 6 9	3.85 B	14				50					

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-20-2003	Complete Drilling	01-20-2003
Drilling Contractor	TSC	Drill Rig	CME 550 ATV
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Drilling Method	2.25" SSA, Boring backfilled with bentonite chips upon completion
While Drilling	▽ DRY	At Completion of Drilling	▽ DRY
Time After Drilling	NA	Depth to Water	▽ NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

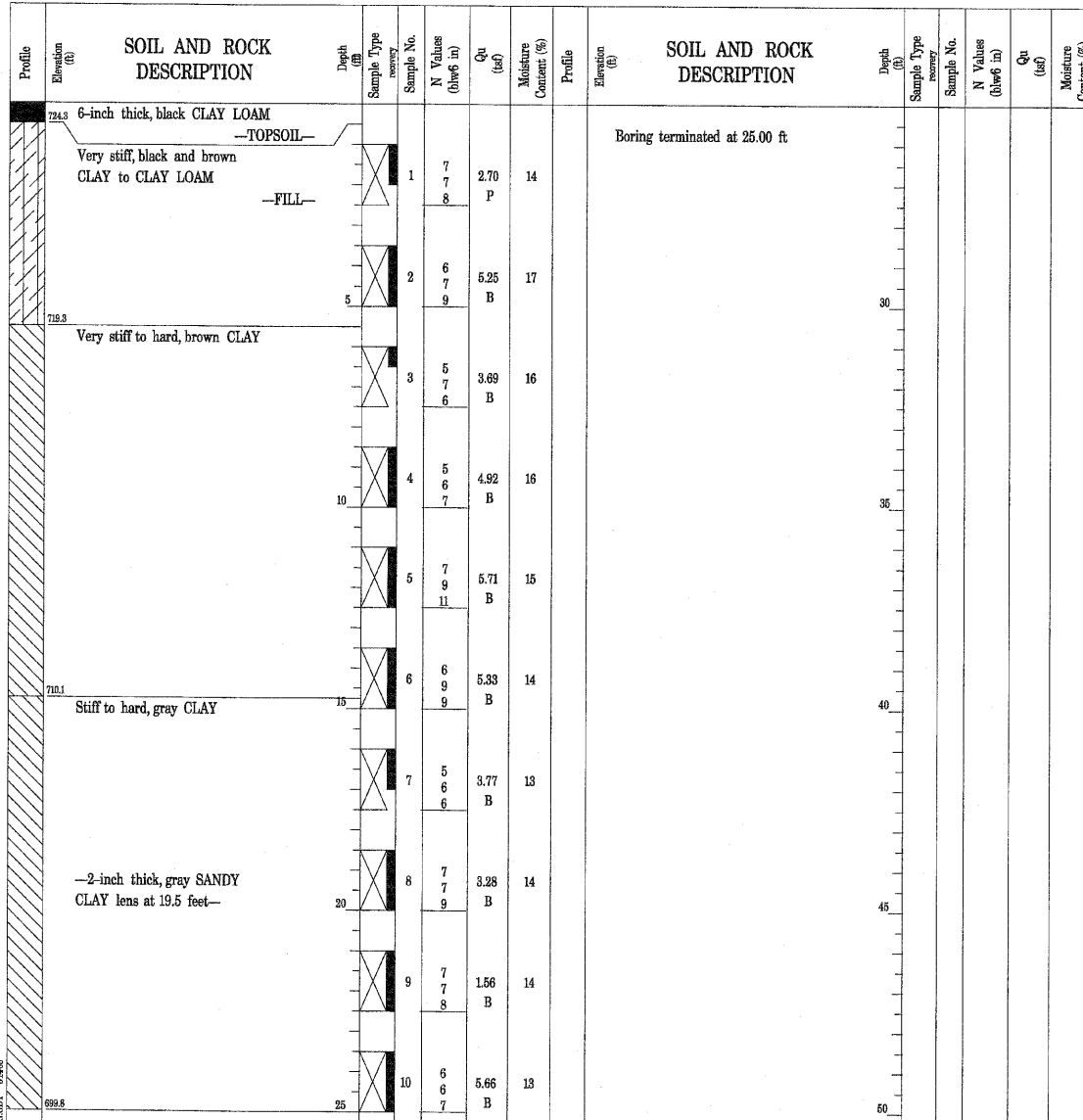
**NOISE WALL B  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 241+7.85 TO 250+69.08  
WILL COUNTY

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
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Addison, IL 60101  
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Fax: 630 458-0900

**BORING LOG BS-027**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 724.82 ft  
North: 1763283.53 ft  
East: 1099810.00 ft  
Station: 242+82.6  
Offset: 61.88 RT

Page 1 of 1



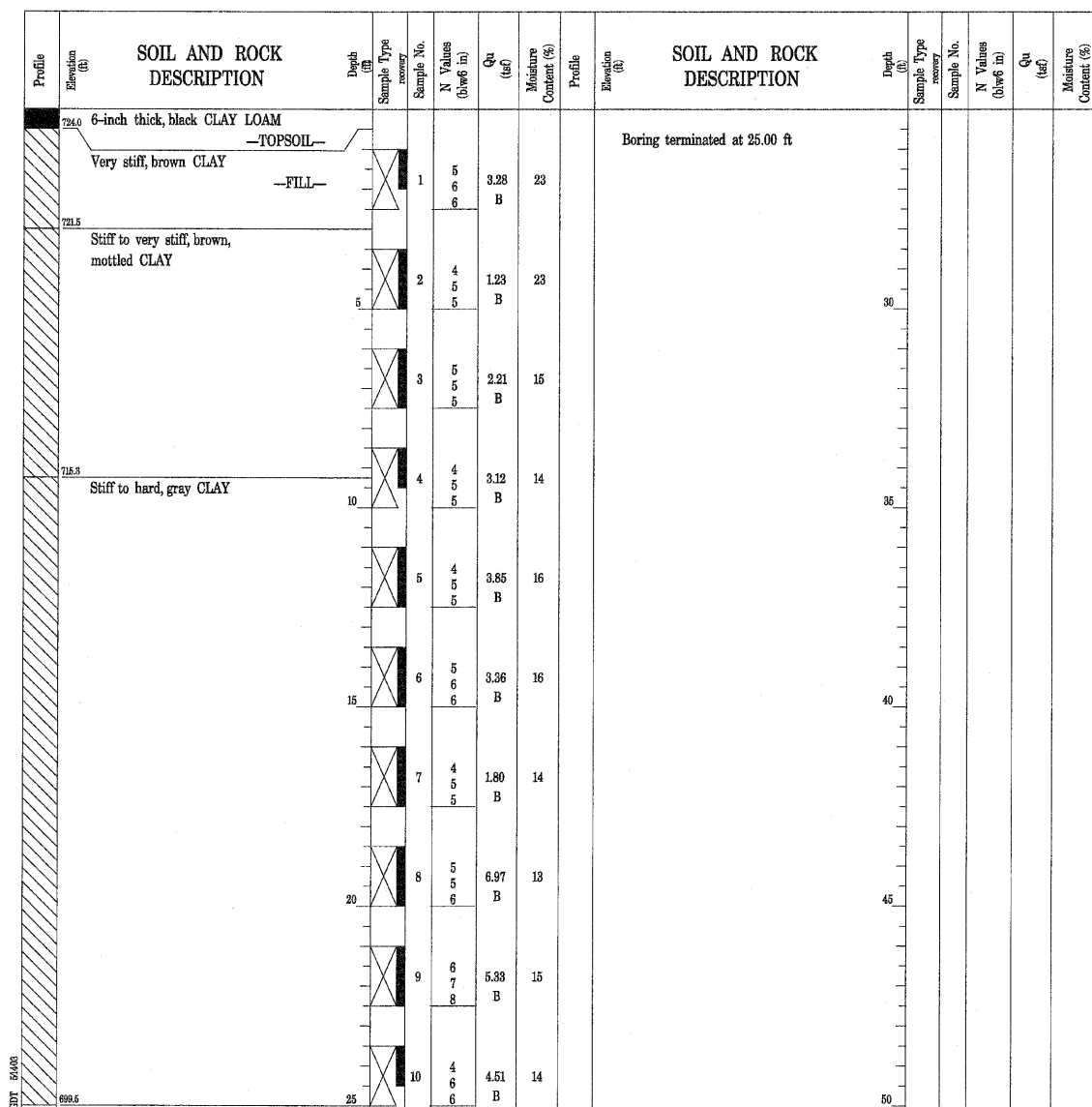
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	01-20-2003	Complete Drilling	01-20-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	CME 550 ATV	At Completion of Drilling	∇	DRY	
Driller	F&A	Logger	J. Kasnick	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	NA	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

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**BORING LOG BS-028**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 724.51 ft  
North: 1763260.65 ft  
East: 1099888.54 ft  
Station: 243+64.16  
Offset: 68.36 RT

Page 1 of 1



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	01-20-2003	Complete Drilling	01-20-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	CME 550 ATV	At Completion of Drilling	∇	DRY	
Driller	F&A	Logger	J. Kasnick	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	NA	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL B  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 241+7.85 TO 250+69.08  
WILL COUNTY

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 69479

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**BORING LOG BS-029**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 722.63 ft  
North: 1763339.24 ft  
East: 1099966.40 ft  
Station: 244+44.74  
Offset: 73.54 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
722.1	6-inch thick, black CLAY LOAM --TOPSOIL--								Boring terminated at 25.00 ft						
	Hard, brown CLAY --FILL--			1	5 7 7	5.82 B	22								
719.6	Very stiff, brown CLAY			2	6 7 7	3.69 B	17								
				3	4 4 5	2.46 B	21								
713.8	3-inch thick, soft, brown SILTY CLAY LOAM lens Stiff, gray CLAY			4	4 4 5	1.23 B	15								
712.1	Loose, brown and black, fine SAND, wet			5	6 4 5	NP	22								
710.6	Very stiff to hard, gray CLAY			6	3 5 7	2.38 B	16								
				7	5 6 7	4.02 B	19								
				8	4 7 8	5.74 B	12								
				9	6 9 13	6.23 B	13								
				10	6 8 8	5.58 B	15								

<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling	01-20-2003	Complete Drilling	01-20-2003
Drilling Contractor	TSC	Drill Rig	CME 550 ATV
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	NA
		While Drilling	10.50 ft
		At Completion of Drilling	DRY

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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**BORING LOG BS-030**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 721.04 ft  
North: 1763218.31 ft  
East: 1100041.63 ft  
Station: 245+22.65  
Offset: 78.79 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
720.5	6-inch thick, black CLAY LOAM --TOPSOIL--								Boring terminated at 25.00 ft						
	Very stiff to hard, black, brown, and gray, gravelly CLAY --FILL--			1	7 6 6	4.51 B	21								
				2	5 5 5	2.79 B	16								
715.5	Hard, brown and gray, mottled CLAY			3	8 10 11	7.13 B	16								
713.0	Stiff to hard, gray CLAY to SILTY CLAY			4	4 5 5	3.20 B	14								
				5	5 6 6	4.59 B	12								
				6	4 4 6	1.64 B	14								
				7	6 7 7	3.75 P	14								
				8	4 4 5	2.95 B	15								
				9	5 6 7	2.46 B	12								
697.5	Very stiff, gray CLAY			10	5 5 6	3.44 B	18								

<b>GENERAL NOTES</b>		<b>WATER LEVEL DATA</b>	
Begin Drilling	01-21-2003	Complete Drilling	01-20-2003
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	NA
		While Drilling	DRY
		At Completion of Drilling	DRY

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

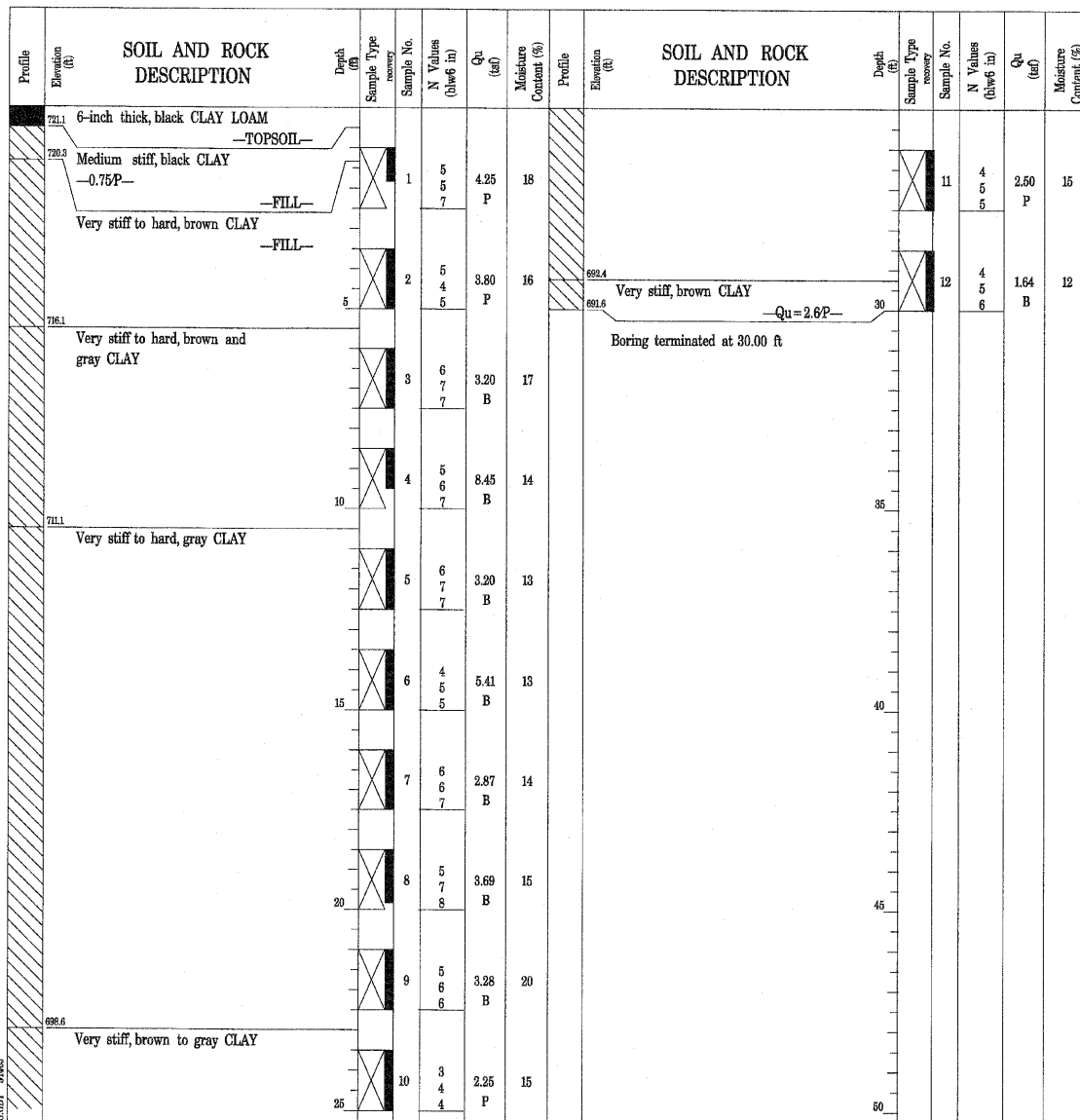
REVISIONS	
NAME	DATE

**NOISE WALL B  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 241+7.85 TO 250+69.08  
WILL COUNTY

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**BORING LOG BS-031** Page 1 of 1  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 721.62 ft  
North: 1763200.89 ft  
East: 1100120.70 ft  
Station: 246+3.61  
Offset: 79.82 RT

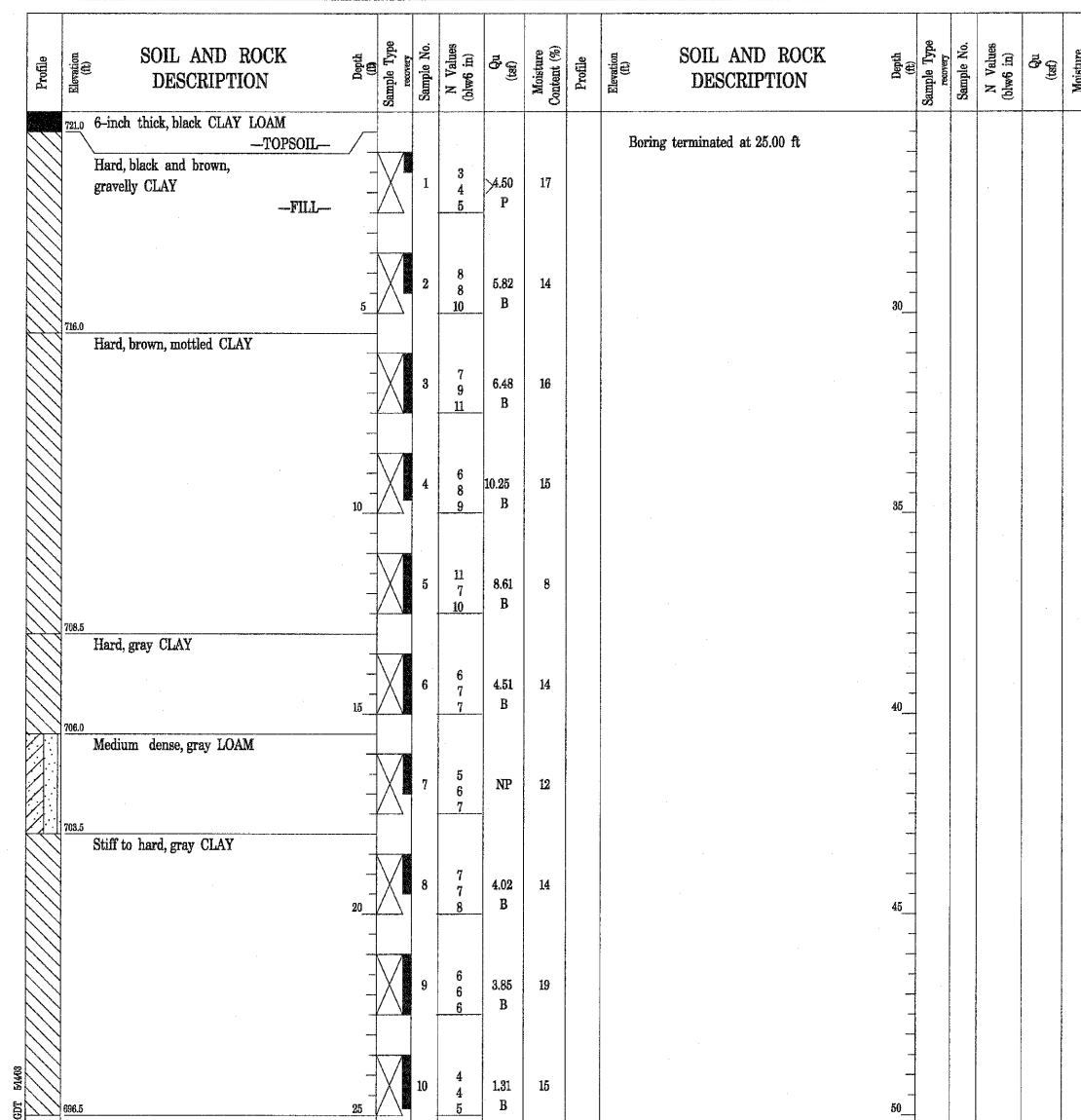


GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	01-21-2003	Complete Drilling	01-20-2003	While Drilling	☐ DRY		
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR	At Completion of Drilling	☑ DRY		
Driller	F&A	Logger	J. Kasnick	Time After Drilling	NA		
Checked by	S. Janowski			Depth to Water	☑ NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

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**BORING LOG BS-032** Page 1 of 1  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 721.53 ft  
North: 1763161.21 ft  
East: 1100194.11 ft  
Station: 246+79.48  
Offset: 84.21 RT



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	01-21-2003	Complete Drilling	01-20-2003	While Drilling	☐ DRY		
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR	At Completion of Drilling	☑ DRY		
Driller	F&A	Logger	J. Kasnick	Time After Drilling	NA		
Checked by	S. Janowski			Depth to Water	☑ NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL B  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 241+7.85 TO 250+69.08  
WILL COUNTY

**Wang Engineering, INC.**  
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Addison, IL 60101  
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**BORING LOG BS-033** Page 1 of 1

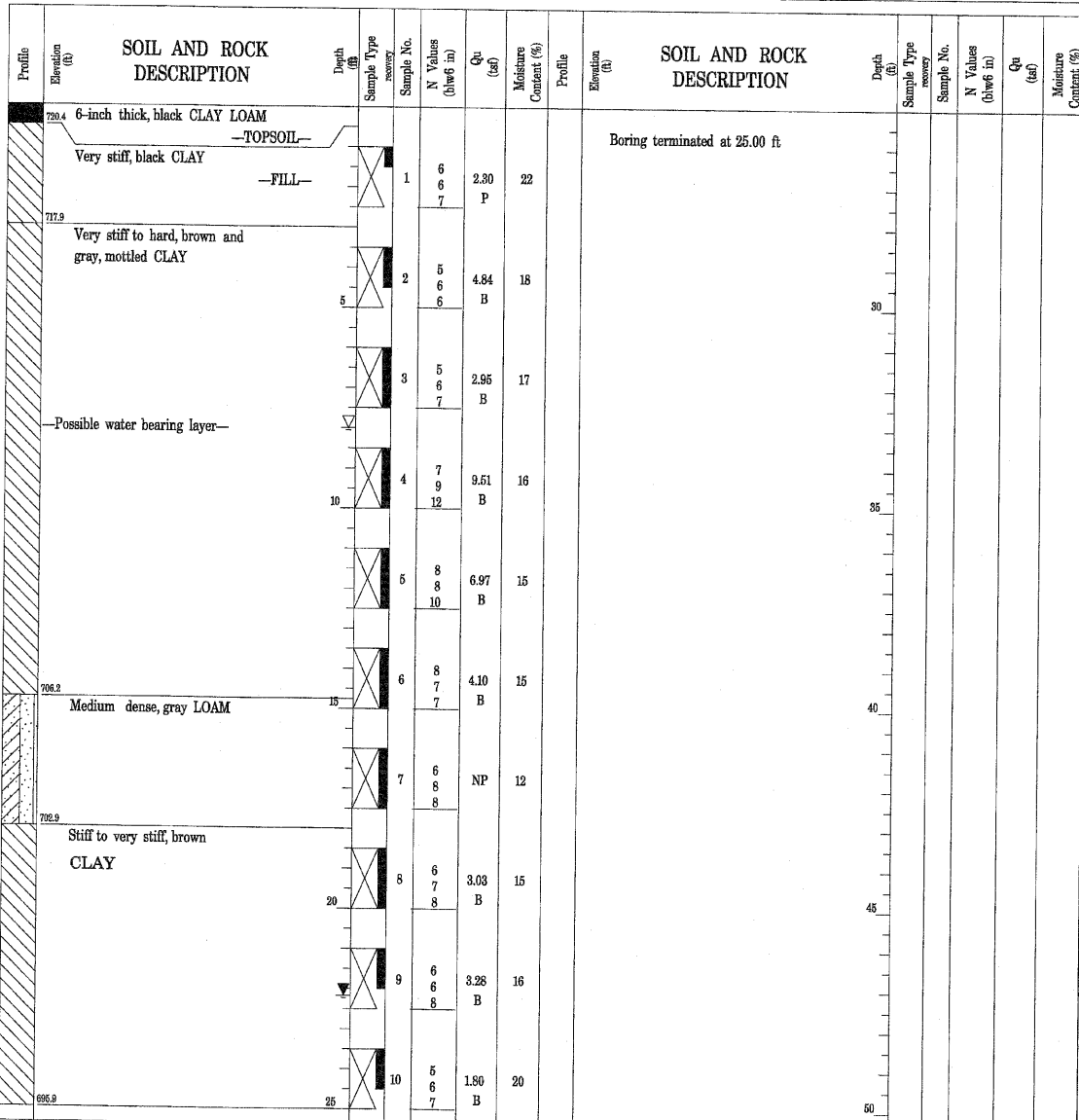
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 720.91 ft  
North: 1763158.09 ft  
East: 1100270.05 ft  
Station: 247+58.33  
Offset: 91.46 RT

Client: Brighton Engineering Company

Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02

Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-21-2003	Complete Drilling	01-20-2003
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	NA
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

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Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-034** Page 1 of 1

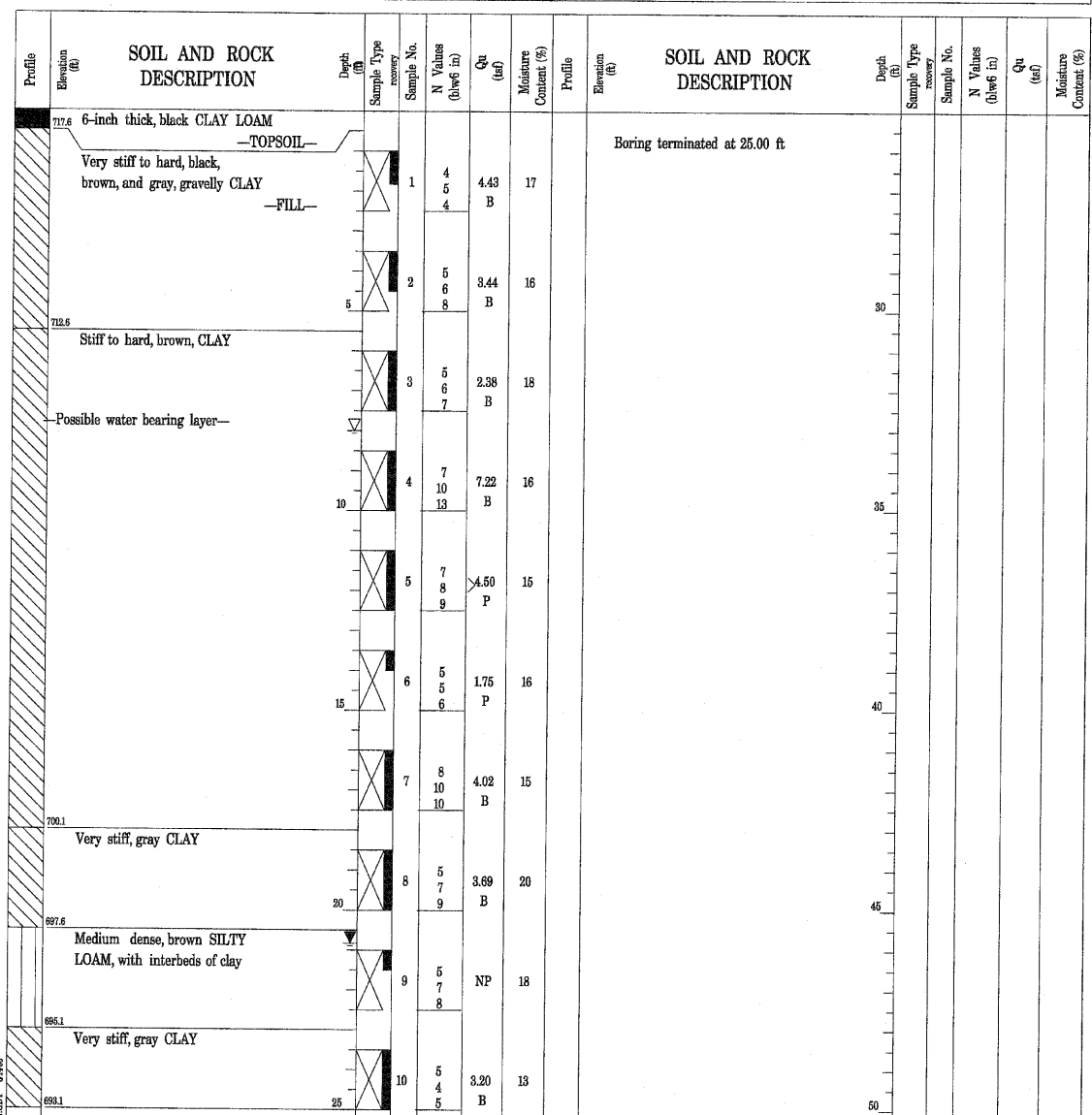
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 718.10 ft  
North: 1763146.43 ft  
East: 1100351.92 ft  
Station: 248+41.07  
Offset: 86.27 RT

Client: Brighton Engineering Company

Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02

Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-21-2003	Complete Drilling	01-20-2003
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	NA
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

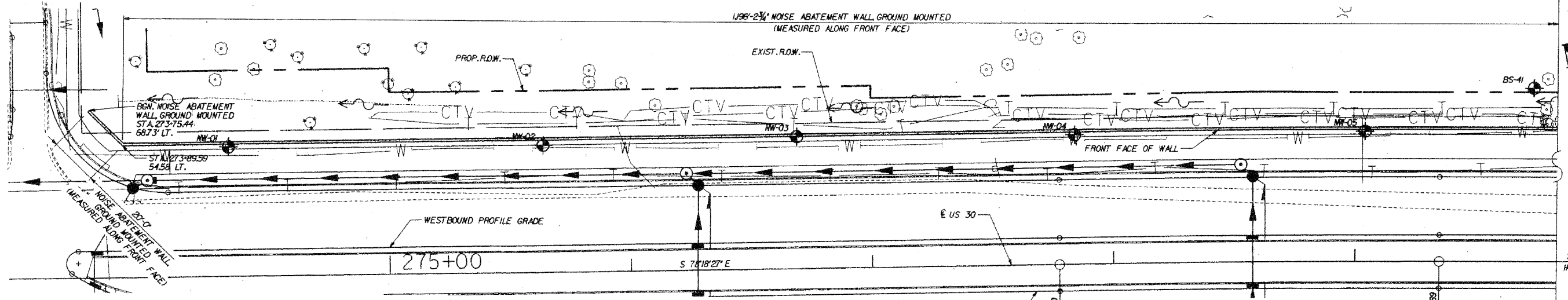
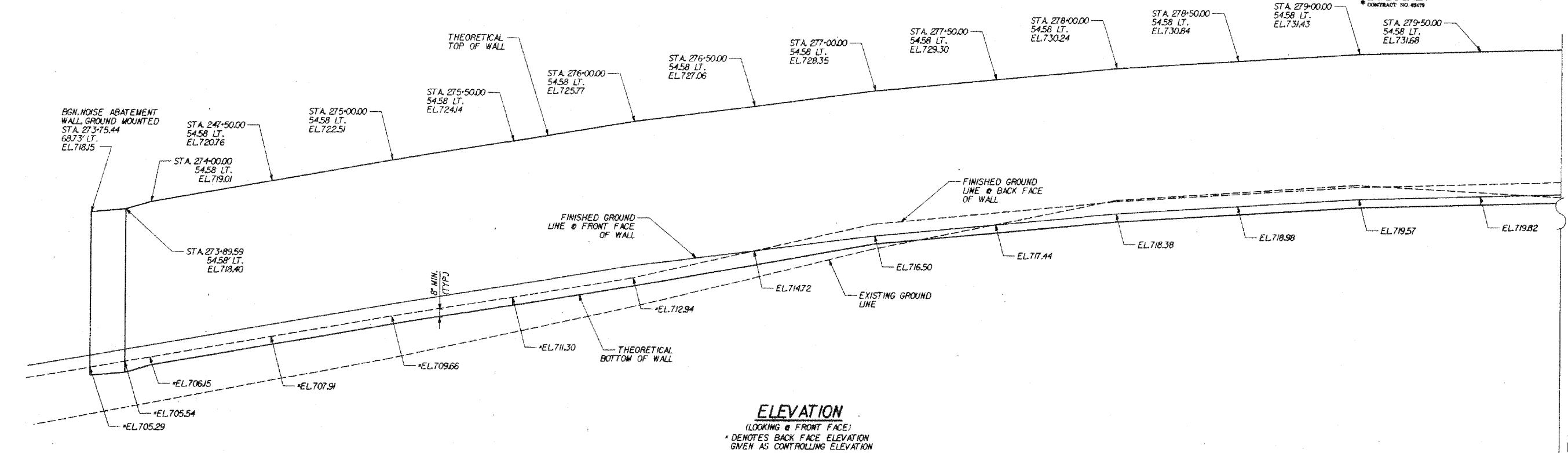
**NOISE WALL B  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION 12 & 13) WRS-3  
STATION 247+7.85 TO 250+69.08  
WILL COUNTY

BENCH MARK: BM 226  
 STA. 287+87.64, 25.41' RT., ELEV. 710.68  
 SET 3/4" DIAMETER IRON ROD AT THE EDGE  
 OF SOUTHERLY STONE SHOULDER OF ROUTE  
 30, 1/100' EAST OF CENTERLINE OF 116TH AVENUE.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAY 888	*	WILL.	1235	746
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* SUCT. 03 & 10 WRS-3 * CONTRACT NO. 65479				

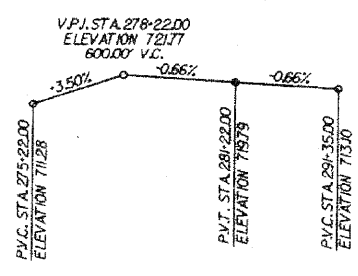
SHEET NO. 1  
 10 SHEETS



**PLAN**

**CURVE DATA**

PI STA - 278+56.20  
 $\Delta$  - 1° 05' 59" (RT)  
 D - 0' 41" 55"  
 R - 8200.00'  
 T - 78.70'  
 L - 157.39'  
 E - 0.38'  
 e =  
 T.P. =  
 S.E. RUN =  
 P.C. STA - 277+77.50  
 P.T. STA - 279+34.89

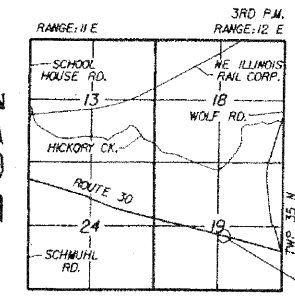


**DESIGN SPECIFICATIONS**

AASHTO 2002 SPECIFICATIONS

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
NOISE ABATEMENT WALL GROUND MOUNTED	SQ. FT.	16,150



LOCATION SKETCH



Wayne A. Trex  
 11-30-10

DESIGNED	WBP
CHECKED	ASP
DRAWN	BGC
CHECKED	WBP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005

**NOISE WALL C  
 GENERAL PLAN 1**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 273+75.74 TO 286+10.14  
 WILL COUNTY

REVISIONS	
NAME	DATE

MATCH LINE STA. 279+83.55

STATION INCREASE

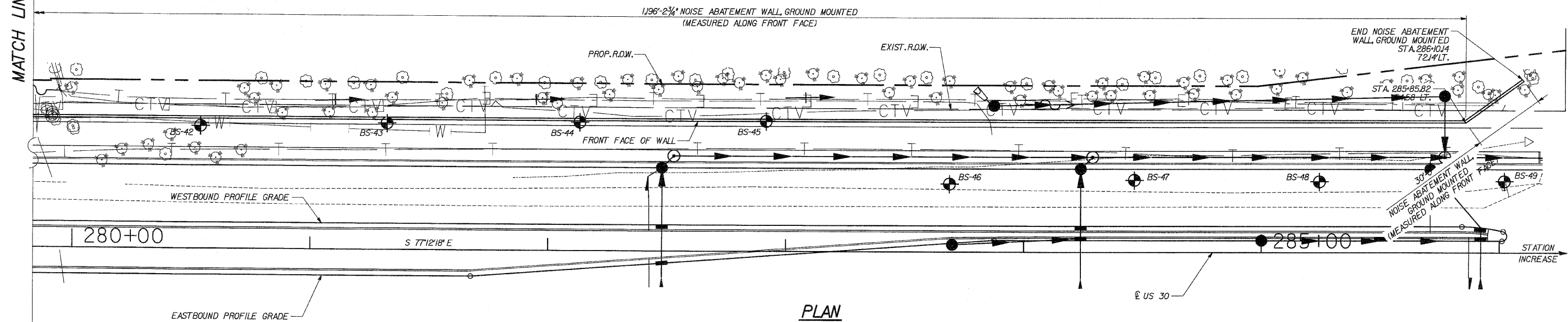
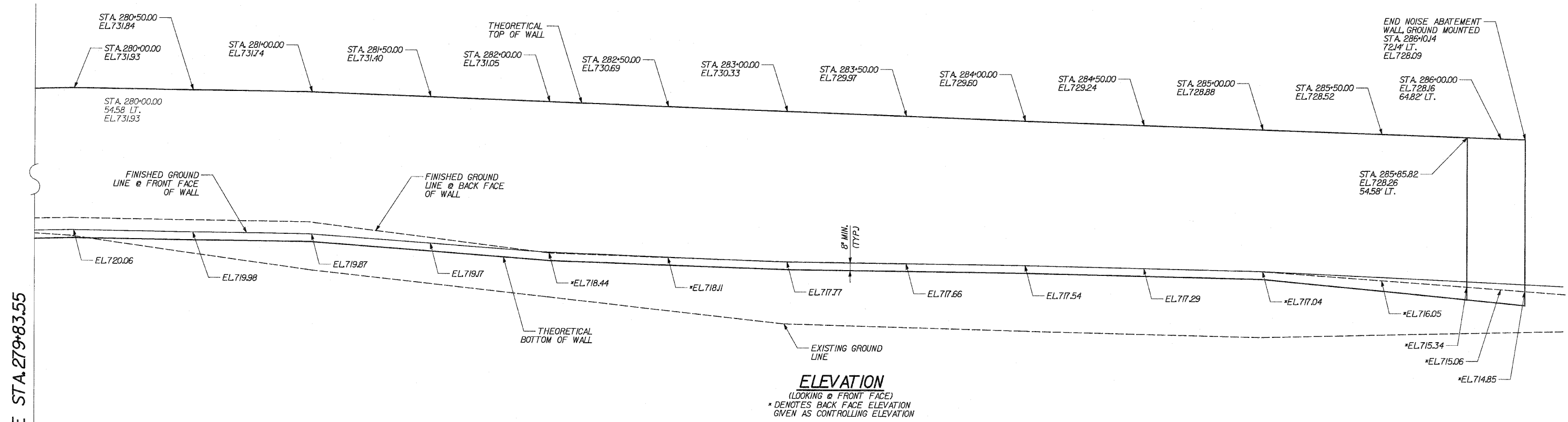
BENCH MARK: BM 226  
 STA. 287+87.64, 25.4' RT., ELEV. 710.68  
 SET 3/4" DIAMETER IRON ROD AT THE EDGE  
 OF SOUTHERLY STONE SHOULDER OF ROUTE  
 30, +/- 100' EAST OF CENTERLINE OF 116TH AVENUE.

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	747
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

\* SECT. 12 & 13) WRS-3  
 \* CONTRACT NO. 62479

SHEET NO. 2  
 10 SHEETS



DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

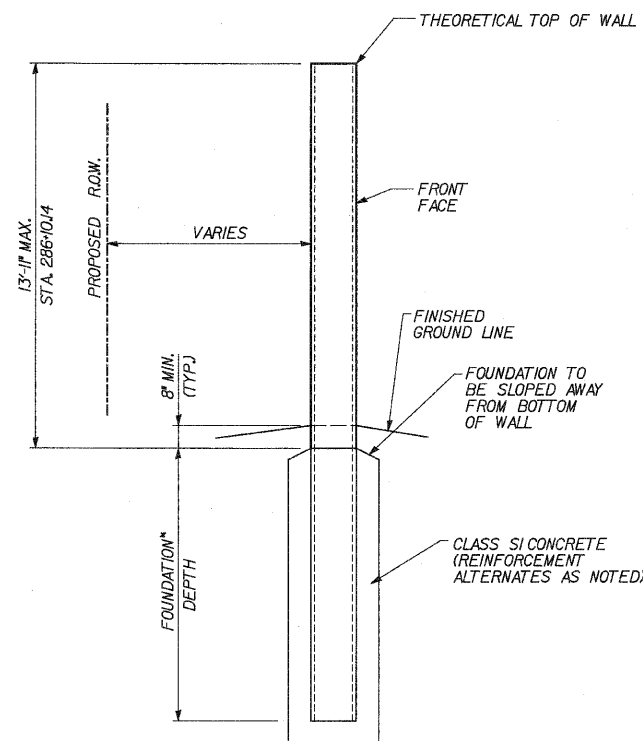
**DLZ** DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005

**NOISE WALL C  
 GENERAL PLAN II**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 273+75.74 TO 286+10.14  
 WILL COUNTY



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL.	1235	748
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

\* SECT. 12 & 13) WRS-3  
\* CONTRACT NO. 62479



**NOISE ABATEMENT WALL GROUND MOUNTED TYPICAL SECTION**

\* FOUNDATION DEPTH TO BE DETERMINED BY CONTRACTOR.

NOTE: LOW CLEARANCE EQUIPMENT SHOULD BE USED FOR THE INSTALLATION OF THE NOISE WALLS AND THE CONTRACTOR SHOULD COORDINATE THE INSTALLATION WITH THE UTILITY COMPANIES

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

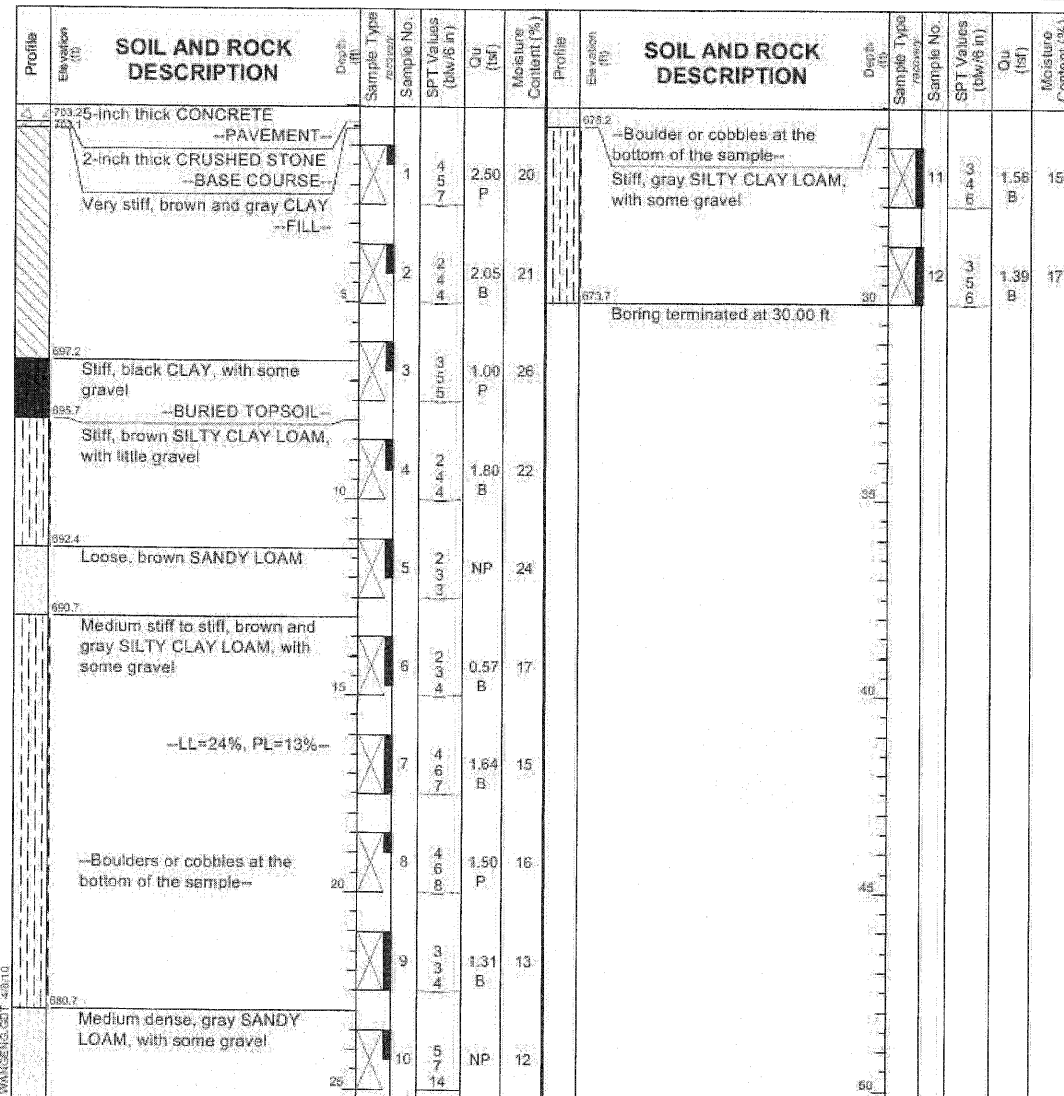
**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL C  
TYPICAL SECTIONS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

**Wang Engineering, Inc.**  
wangeng@wangeng.com  
1145 Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG NW-01**  
WEI Job No.: 301-01-02  
Client: DLZ Illinois, Inc.  
Project: GEOT - US. 30, Will Co., IL, IDOT D-91-219-02  
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21

Date: NGVD  
Elevation: 703.66 ft  
North: 1762696.11 ft  
East: 1102883.61 ft  
Station: 274+33.32  
Offset: 53.5 LT



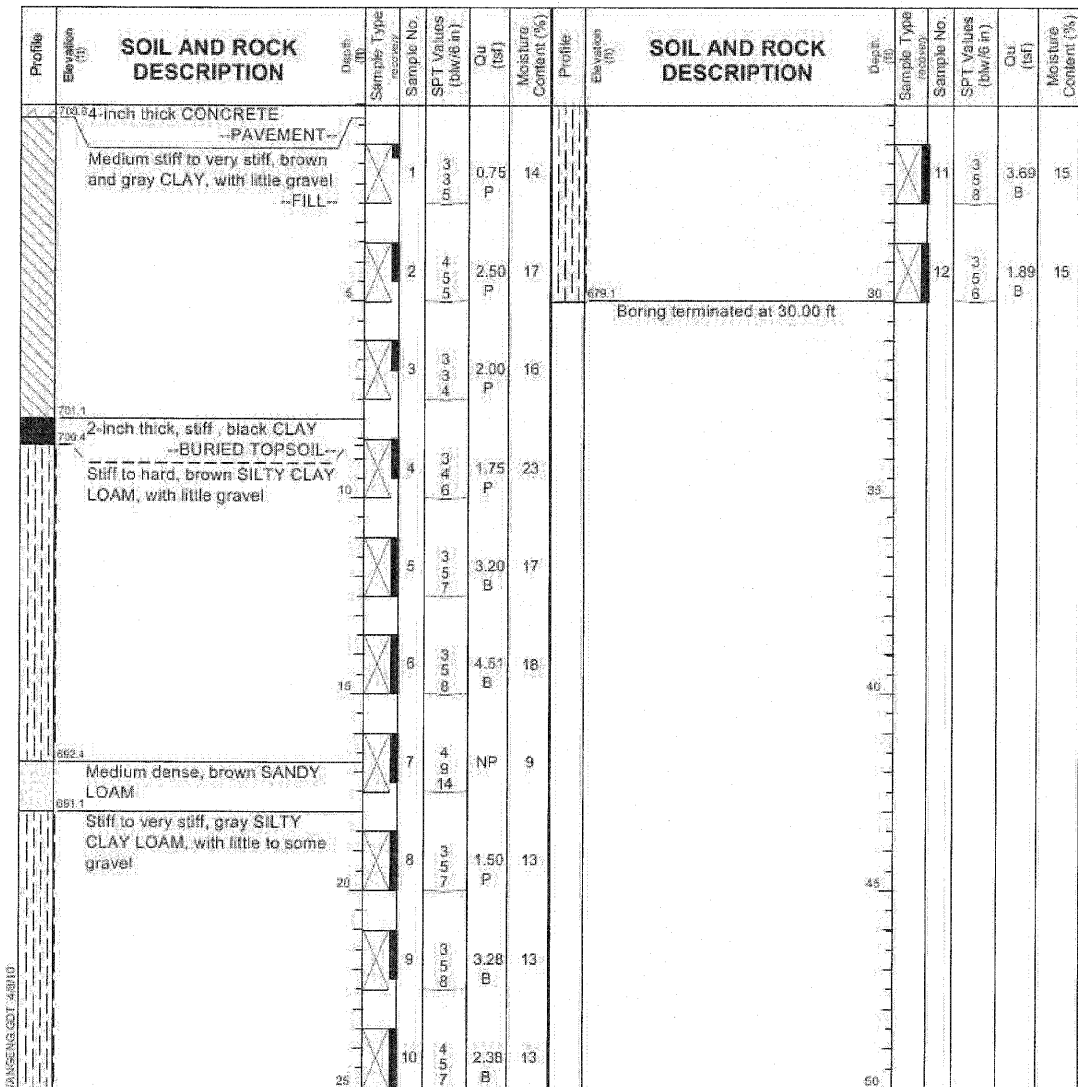
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-25-2010	Complete Drilling	03-25-2010	While Drilling	☐	DRY	
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	☑	DRY	
Driller	K&J	Logger	H. Suhail	Checked by	A. Kurnia	Time After Drilling	NA
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion			Depth to Water	☑	NA	

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**Wang Engineering, Inc.**  
wangeng@wangeng.com  
1145 Main Street  
Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG NW-02**  
WEI Job No.: 301-01-02  
Client: DLZ Illinois, Inc.  
Project: GEOT - US. 30, Will Co., IL, IDOT D-91-219-02  
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21

Date: NGVD  
Elevation: 709.10 ft  
North: 1762699.51 ft  
East: 1103013.43 ft  
Station: 275+63.84  
Offset: 52.5 LT



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-25-2010	Complete Drilling	03-25-2010	While Drilling	☐	DRY	
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	☑	DRY	
Driller	K&J	Logger	H. Suhail	Checked by	A. Kurnia	Time After Drilling	NA
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion			Depth to Water	☑	NA	

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
DLZ Illinois, Inc.  
85 W. Algonquin Rd., Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL C  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION 12 & 13 WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

Page 1 of 1

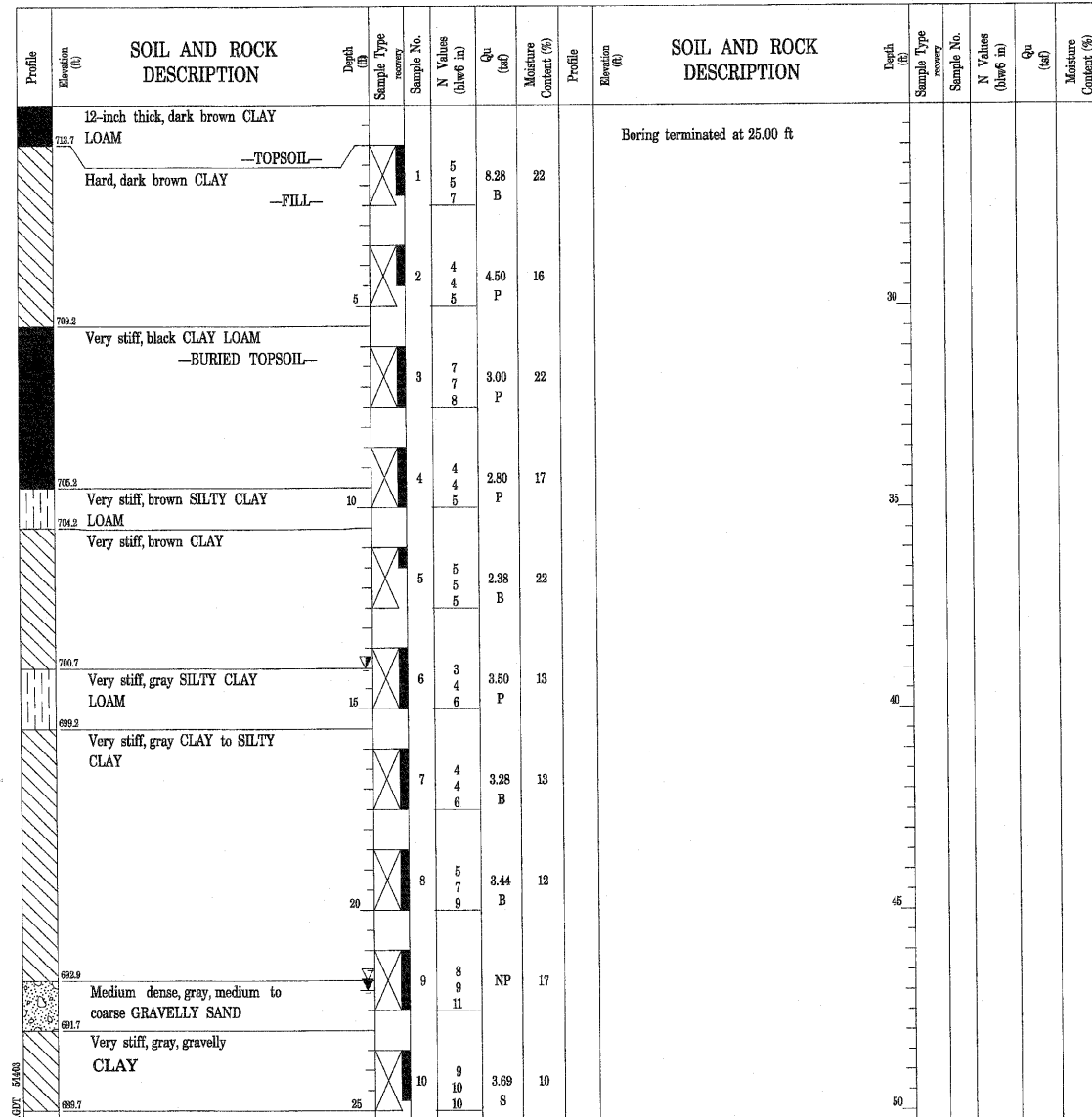
**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-044**

WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 714.65 ft  
North: 1762593.80 ft  
East: 1103682.29 ft  
Station: 282+13.45  
Offset: 54.04 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-04-2003	Complete Drilling	03-04-2003
Drilling Contractor	TSC	Drill Rig	CME 750 ATV
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	48 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	14.00 ft
		While Drilling	21.75 ft
		At Completion of Drilling	22.00 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

Page 1 of 1

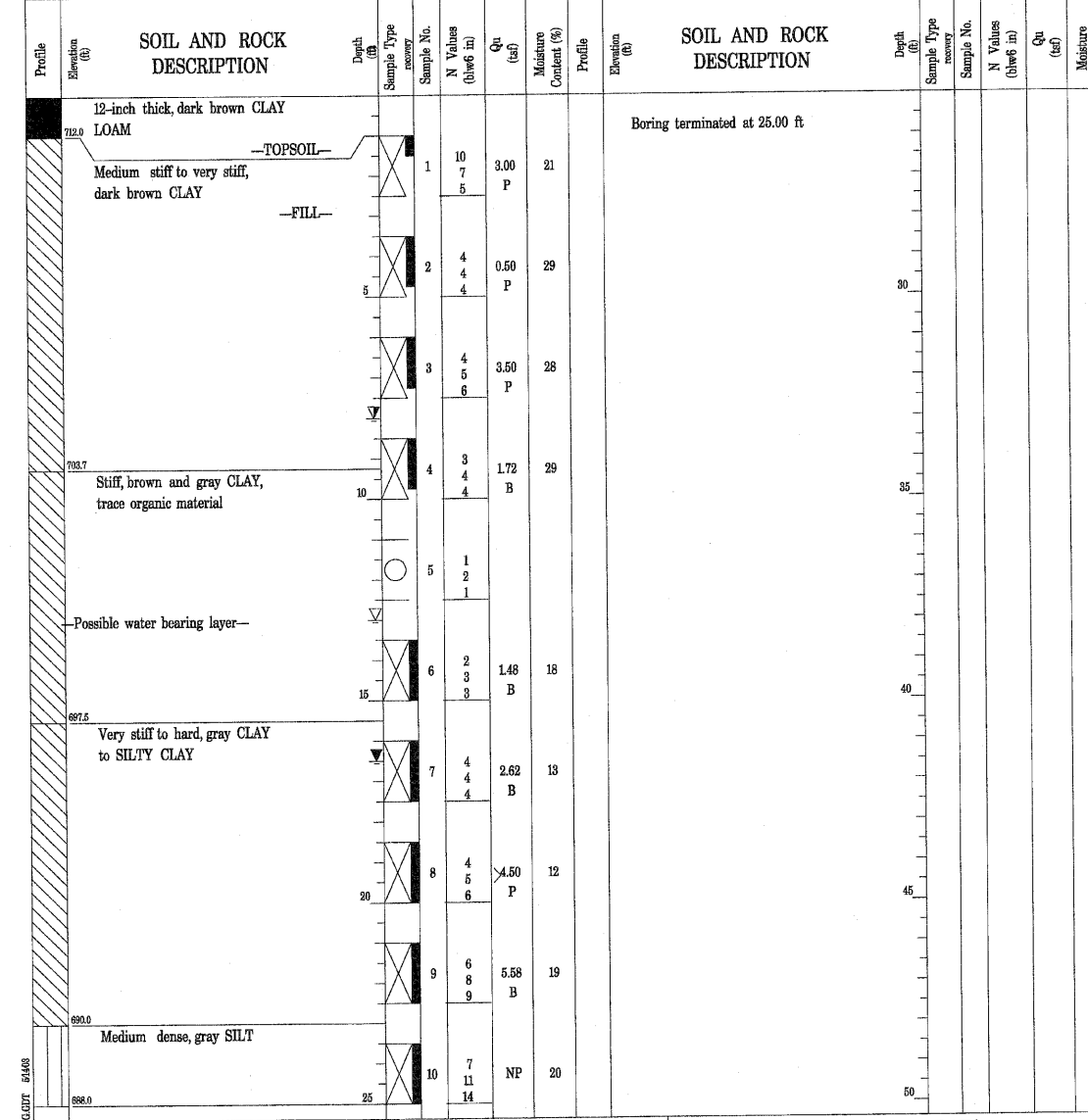
**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-045**

WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 712.95 ft  
North: 1762576.58 ft  
East: 1103758.82 ft  
Station: 282+91.77  
Offset: 54.68 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-04-2003	Complete Drilling	03-04-2003
Drilling Contractor	TSC	Drill Rig	CME 750 ATV
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	48 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	8.00 ft
		While Drilling	13.00 ft
		At Completion of Drilling	16.50 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL C  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION 12 & 13) WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

**Wang Engineering, Inc.**  
Consulting Geotechnical and  
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wangeng@wangeng.com  
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Lombard, IL 60148  
Telephone: 630 953-9928  
Fax: 630 953-9938

**BORING LOG NW-03** Page 1 of 1

WEI Job No.: 301-01-02  
Client: DLZ Illinois, Inc.  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21

Datum: NGVD  
Elevation: 713.98 ft  
North: 1762648.49 ft  
East: 1103114.33 ft  
Station: 276+68.86  
Offset: 54.5 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)
	713.74	4-inch thick CONCRETE								688.5	Very stiff, gray SILTY CLAY LOAM, with some gravel						
	713.32	5-inch thick CRUSHED STONE															
		Stiff, gray CLAY, with little gravel															
			1		1	1.75	14							11	4.4	2.21	12
			2		2	1.15	24							12	4.6	2.13	13
	706.5	Very stiff, brown and gray SILTY CLAY LOAM, with little to some gravel								688.0	Boring terminated at 30.00 ft.						
			3		3	2.79	17										
			4		4	3.36	20										
			5		5	2.05	18										
			6		6	2.46	15										
			7		7	2.71	15										
			8		8	2.79	15										
			9		9	2.30	16										
			10		10	0.57	15										

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-25-2010	Complete Drilling	03-25-2010	While Drilling	DRY		
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	DRY		
Driller	K&J	Logger	H. Suhail	Checked by	A. Kurnia		
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion			Time After Drilling	NA		
				Depth to Water	NA		

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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Fax: 630 953-9938

**BORING LOG NW-04** Page 1 of 1

WEI Job No.: 301-01-02  
Client: DLZ Illinois, Inc.  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21

Datum: NGVD  
Elevation: 718.90 ft  
North: 1762625.58 ft  
East: 1103225.47 ft  
Station: 277+84.12  
Offset: 53.5 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	SPT Values (blows/ft)	Qu (tsf)	Moisture Content (%)
	718.74	3-inch thick CONCRETE								683.4	Very stiff, gray SILTY CLAY LOAM, with some gravel						
	718.32	4-inch thick CRUSHED STONE															
		Stiff, gray CLAY															
			1		1	3.9	1.48	18						11	4.0	3.61	15
			2		2	3.4	3.20	21						12	4.0	3.77	16
			3		3	3.4	2.13	16									
			4		4	3.4	1.72	16									
			5		5	3.4	2.30	15									
			6		6	3.5	3.20	20									
	702.7	Medium dense, gray, medium SAND								684.9	Boring terminated at 30.00 ft.						
			7		7	2.4	NP	24									
			8		8	11	NP	22									
			9		9	15	NP	20									
			10		10	13	4.00	11									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-25-2010	Complete Drilling	03-25-2010	While Drilling	16.25 ft		
Drilling Contractor	WTS	Drill Rig	D 50 ATV	At Completion of Drilling	17.00 ft		
Driller	K&J	Logger	H. Suhail	Checked by	A. Kurnia		
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion			Time After Drilling	NA		
				Depth to Water	NA		

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

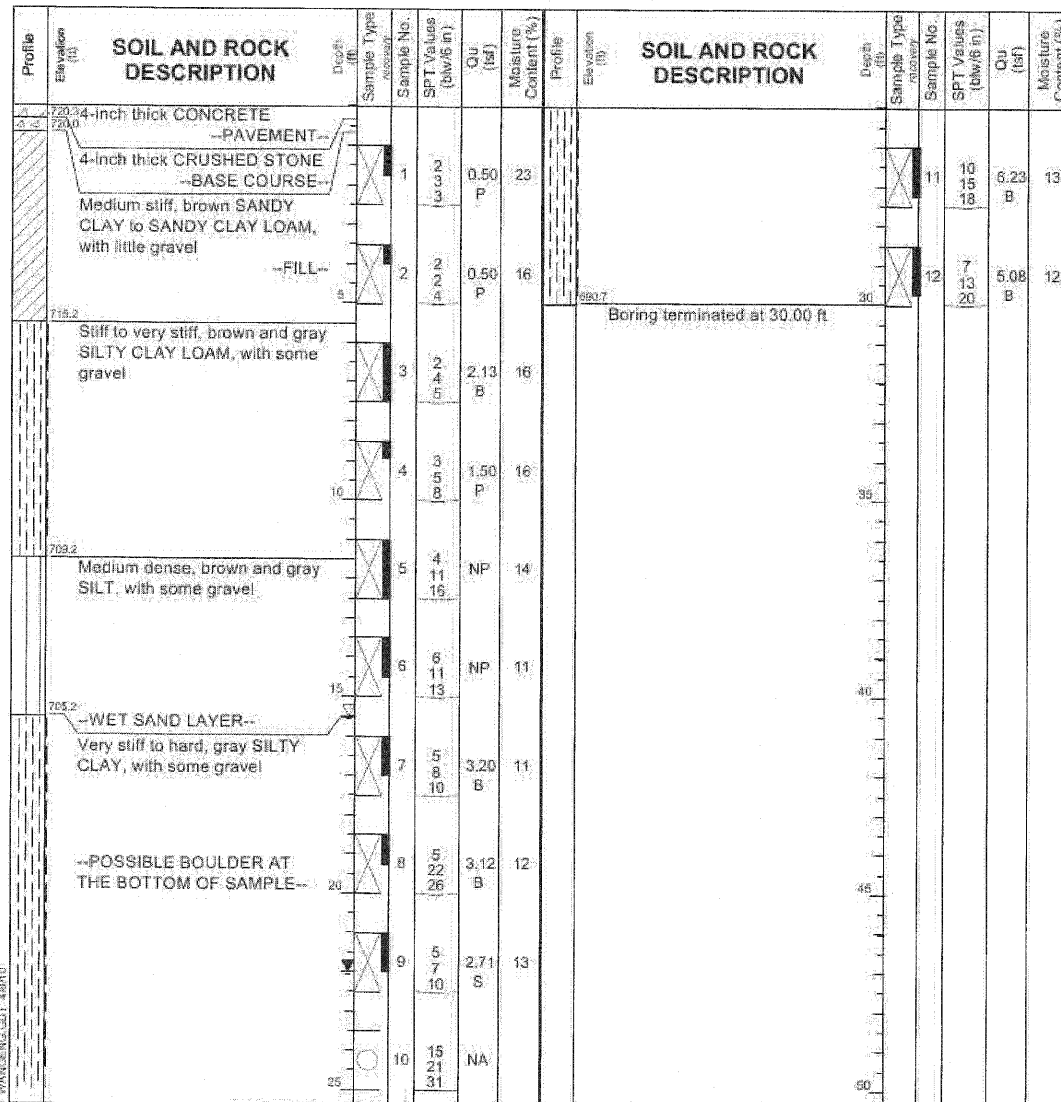
**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL C  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

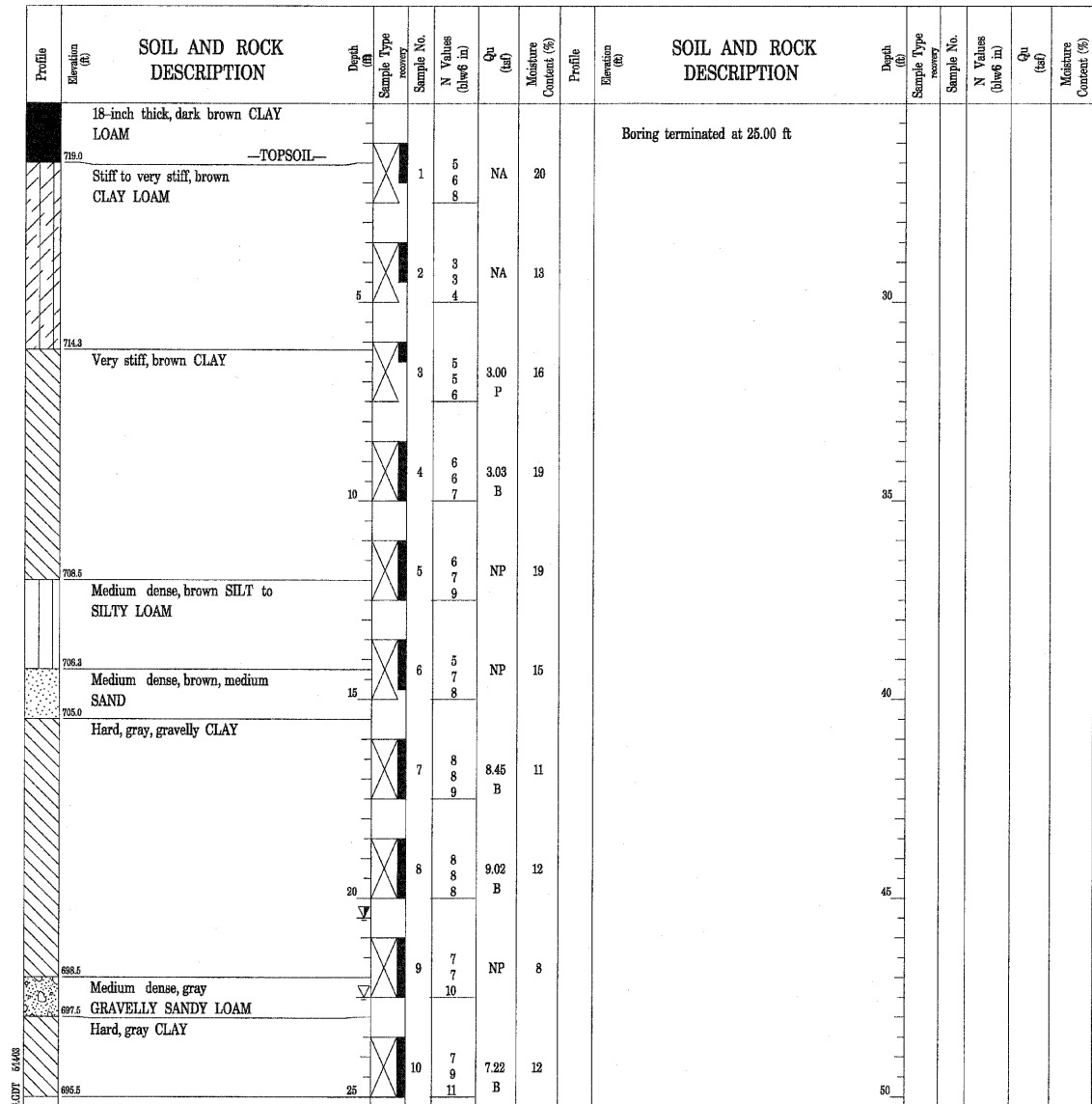
\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479

<p>Wang Engineering, Inc. wangeng@wangeng.com 1145 Main Street Lombard, IL 60148 Telephone: 630 953-9928 Fax: 630 953-9938</p>	<b>BORING LOG NW-05</b>		Page 11 of 11
	WEI Job No.: 301-01-02		Datum: NGVD
	Client: DLZ Illinois, Inc.		Elevation: 720.67 ft
	Project: GEOT - US. 30, Will Co. IL, IDOT D-91-219-02		North: 1762600.85 ft
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21		East: 1103339.08 ft	
		Station: 279+04.00	
		Offset: 53.8 LT	



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-26-2010	Complete Drilling	03-26-2010
Drilling Contractor	WTS	Drill Rig	D 50 ATV
Driller	K&J	Logger	H. Suhail
Drilling Method	3.25 IDA HSA; Boring backfilled upon completion		
While Drilling	15.50 ft	At Completion of Drilling	22.00 ft
Time After Drilling	NA	Depth to Water	NA

<p>Wang Engineering, Inc. wangeng@wangeng.com 100 Fairbank Street Addison, IL 60101 Telephone: 630 458-0700 Fax: 630 458-0900</p>	<b>BORING LOG BS-041</b>		Page 1 of 1
	WEI Job No.: 301-01-01		Datum: NGVD
	Client: Brighton Engineering Company		Elevation: 720.53 ft
	Project: GEOT - US. 30, Will Co. IL, IDOT D-91-219-02		North: 1763663.47 ft
Location: T35N, R11E: Sec 22-24, R12E: Sec 19-21		East: 1103452.32 ft	
		Station: 279+73.64	
		Offset: 71.53 LT	



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-04-2003	Complete Drilling	03-04-2003
Drilling Contractor	TSC	Drill Rig	CME 750 ATV
Driller	C&J	Logger	H. Suhail
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion		
While Drilling	22.50 ft	At Completion of Drilling	DRY
Time After Drilling	48 hours	Depth to Water	20.50 ft

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

DLZ  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

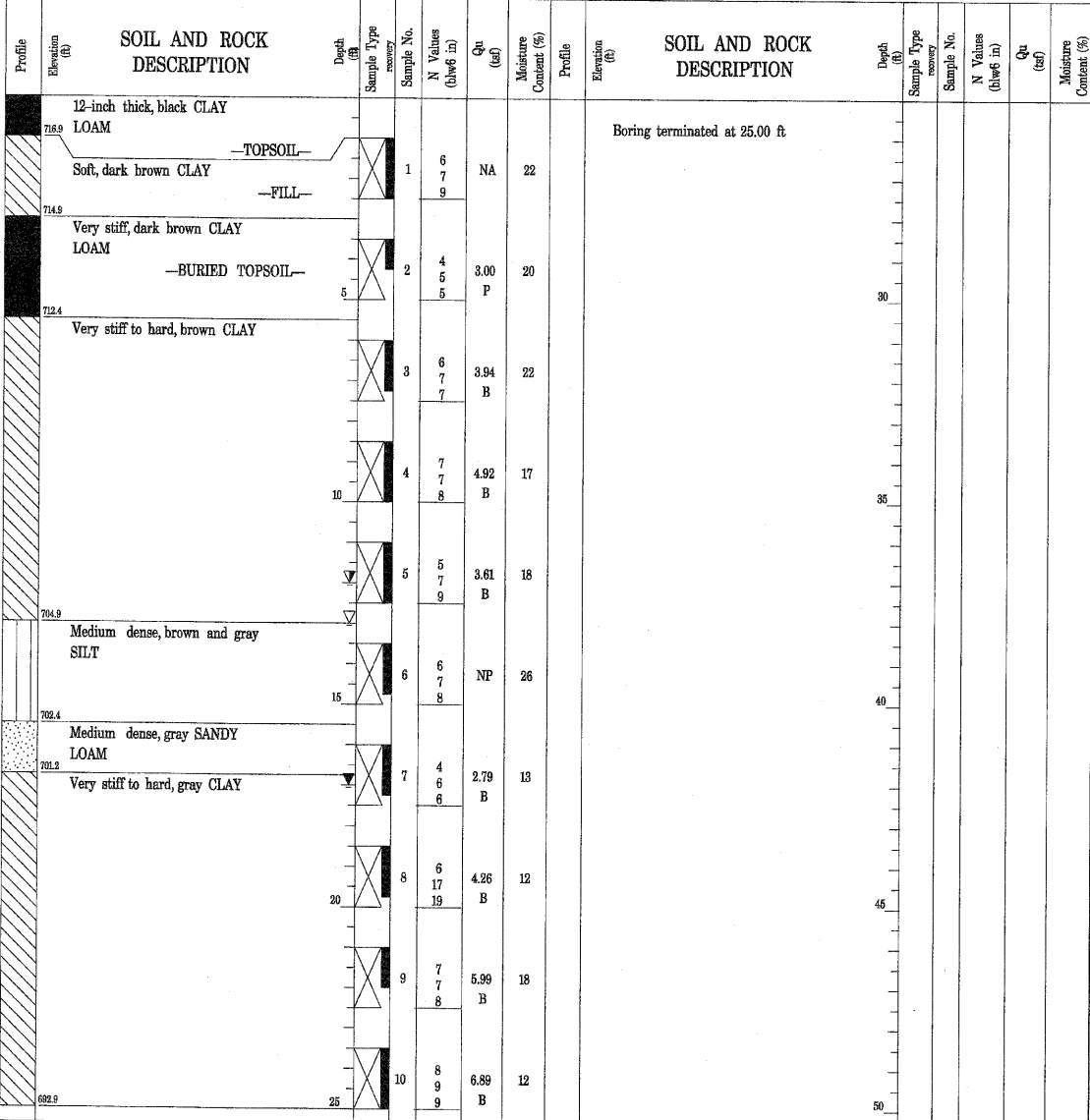
**NOISE WALL C  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

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100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-042**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 717.90 ft  
North: 1762626.23 ft  
East: 1103526.12 ft  
Station: 280+53.86  
Offset: 51.56 LT

Page 1 of 1



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-04-2003	Complete Drilling	03-04-2003
Drilling Contractor	TSC	Drill Rig	CME 750 ATV
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	48 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	12.00 ft

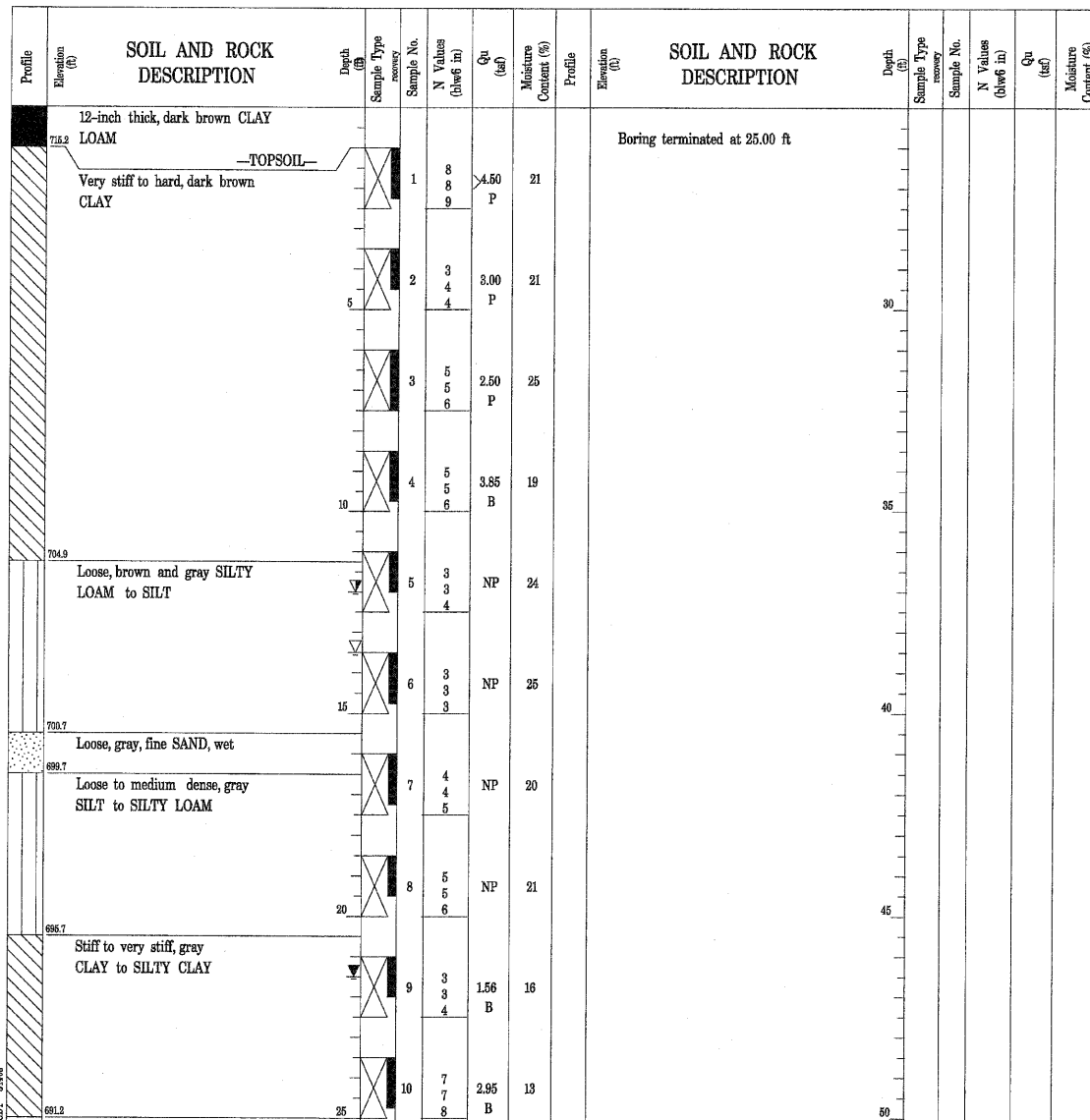
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**Wang Engineering, INC.**  
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wangeng@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-043**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 716.16 ft  
North: 1762610.40 ft  
East: 1103602.96 ft  
Station: 281+32.30  
Offset: 53.14 LT

Page 1 of 1



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-04-2003	Complete Drilling	03-04-2003
Drilling Contractor	TSC	Drill Rig	CME 750 ATV
Driller	C&J	Logger	H. Suhail
Checked by	S. Janowski	Time After Drilling	48 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	12.00 ft

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

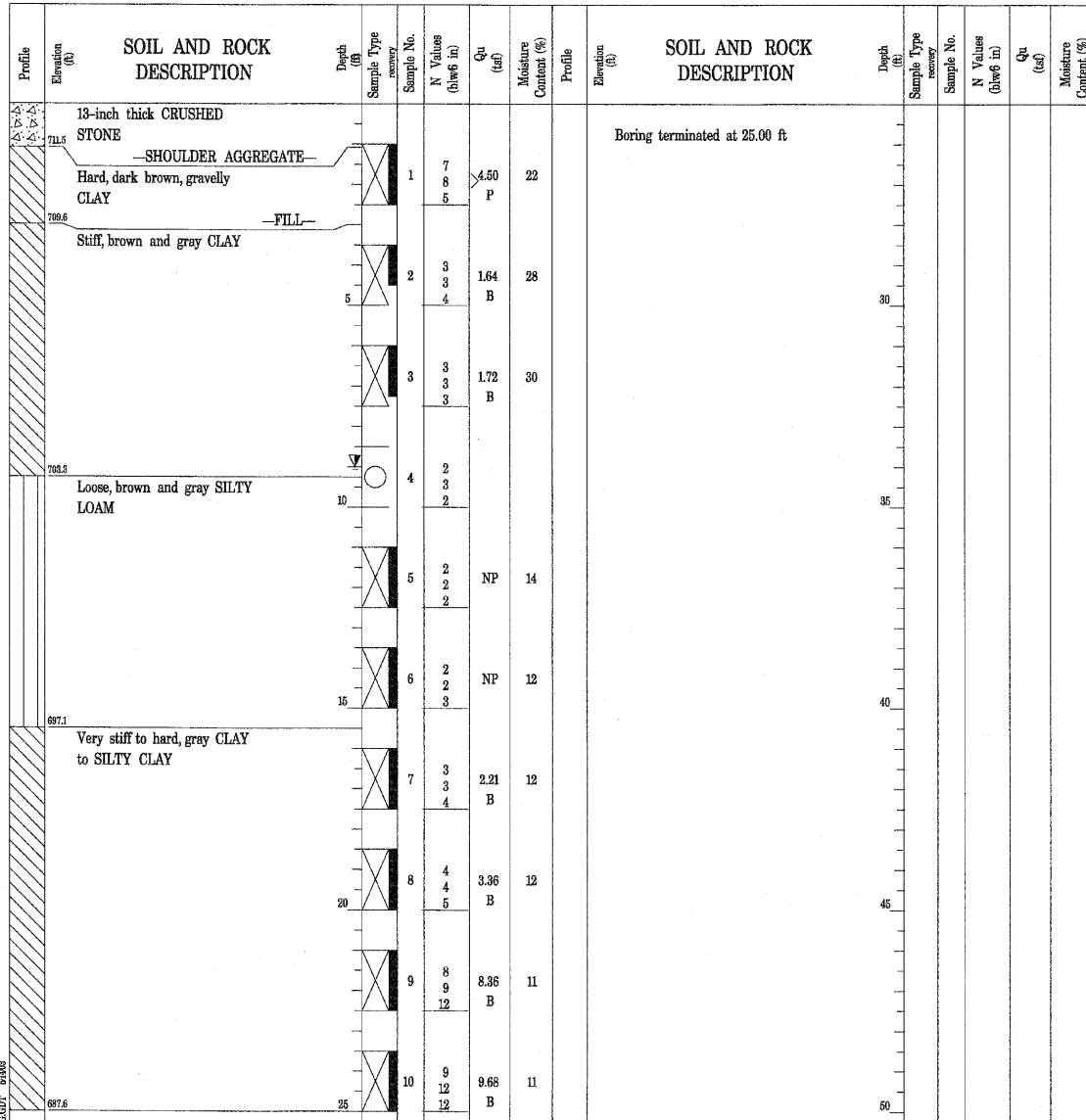
**NOISE WALL C BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

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Fax: 630 458-0900

**BORING LOG BS-046**  
Page 1 of 1  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 712.55 ft  
North: 1762584.10 ft  
East: 1103928.17 ft  
Station: 283+68.81  
Offset: 28.61 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



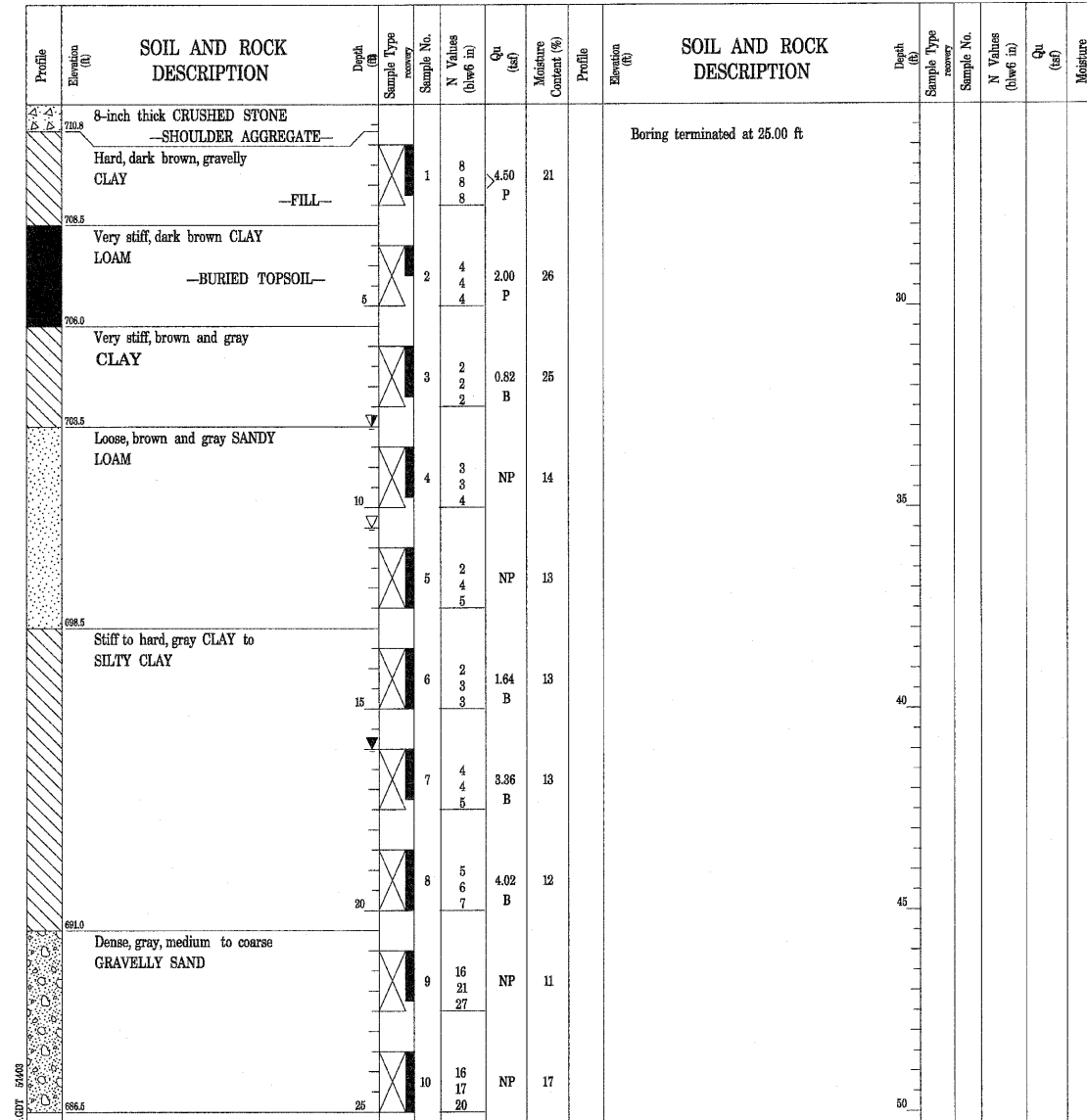
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-06-2003	Complete Drilling	03-06-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	CME 750 ATV	At Completion of Drilling	∇	DRY	
Driller	C&J	Logger	H. Suhail	Time After Drilling		24 hours	
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	9.00 ft	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-047**  
Page 1 of 1  
WEI Job No.: 301-01-01

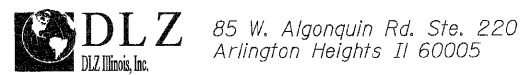
Datum: NGVD  
Elevation: 711.48 ft  
North: 1762518.59 ft  
East: 1103904.41 ft  
Station: 284+46.59  
Offset: 30.38 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-06-2003	Complete Drilling	03-06-2003	While Drilling	∇	10.50 ft	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	∇	16.00 ft	
Driller	C&J	Logger	H. Suhail	Time After Drilling		24 hours	
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	8.00 ft	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP



REVISIONS	
NAME	DATE

**NOISE WALL C  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-048**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 710.92 ft  
North: 1762500.79 ft  
East: 1103980.13 ft  
Station: 285+24.38  
Offset: 29.79 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)
	700.4	6-inch thick CRUSHED STONE -SHOULDER AGGREGATE- Hard, dark brown, gravelly CLAY -FILL-	0	1	5 6	9.10 B	16			Boring terminated at 25.00 ft					
	707.9	Stiff to very stiff, brown and gray CLAY	5	2	3 3 4	1.89 B	26								
			10	3	2 3 3	2.38 B	20								
			15	4	3 3 3	1.35 B	21								
			20	5	4 5 5	3.03 B	17								
	697.3	Hard, gray CLAY to SILTY CLAY	25	6	5 6 8	5.90 B	11								
	694.3	Very dense, gray, medium to coarse GRAVELLY SAND	30	7	12 13 13	NP	7								
			35	8	25 28 35	NP	8								
	690.4	Hard, gray CLAY to SILTY CLAY	40	9	11 12 14	8.28 B	14								
	685.9		45	10	13 15 18	4.51 B	12								

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-06-2003	Complete Drilling	03-06-2003	While Drilling	▽ 18.00 ft		
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽ 12.50 ft		
Driller	C&J	Logger	H. Suhail	Checked by	S. Janowski	Time After Drilling	24 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	▽ 9.50 ft	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

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**BORING LOG BS-049**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 710.88 ft  
North: 1762488.75 ft  
East: 1104055.92 ft  
Station: 286+2.06  
Offset: 29.96 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)
	710.1	9-inch thick CRUSHED STONE -SHOULDER AGGREGATE- Hard, dark brown CLAY	0	1	6 8 10	10.08 B	26			Boring terminated at 25.00 ft					
	707.9	Soft, brown SILTY CLAY LOAM	5	2	3 4 4	NA	28								
	704.1	Very stiff, brown CLAY	10	3	8 10 16										
	700.4	Very stiff to hard, gray CLAY to SILTY CLAY	15	4	9 9 9	3.69 B	14								
			20	5	5 6 7	3.53 B	13								
			25	6	14 16 17	>4.50 P	9								
			30	7	12 13 15	2.62 S	10								
			35	8	12 12 12	8.94 S	12								
			40	9	12 13 15	7.38 S	11								
	685.9		45	10	14 15 18	5.58 B	11								

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-06-2003	Complete Drilling	03-06-2003	While Drilling	▽ DRY		
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽ DRY		
Driller	C&J	Logger	H. Suhail	Checked by	S. Janowski	Time After Drilling	24 hours
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	▽ 21.00 ft	The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

DESIGNED	WSP
CHECKED	ASP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

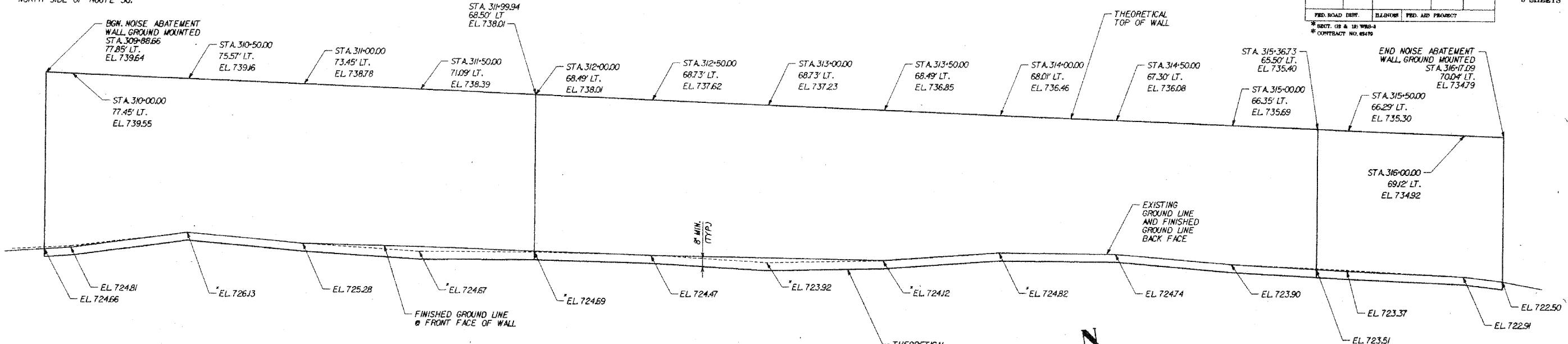
REVISIONS	
NAME	DATE

**NOISE WALL C  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 273+75.74 TO 286+10.14  
WILL COUNTY

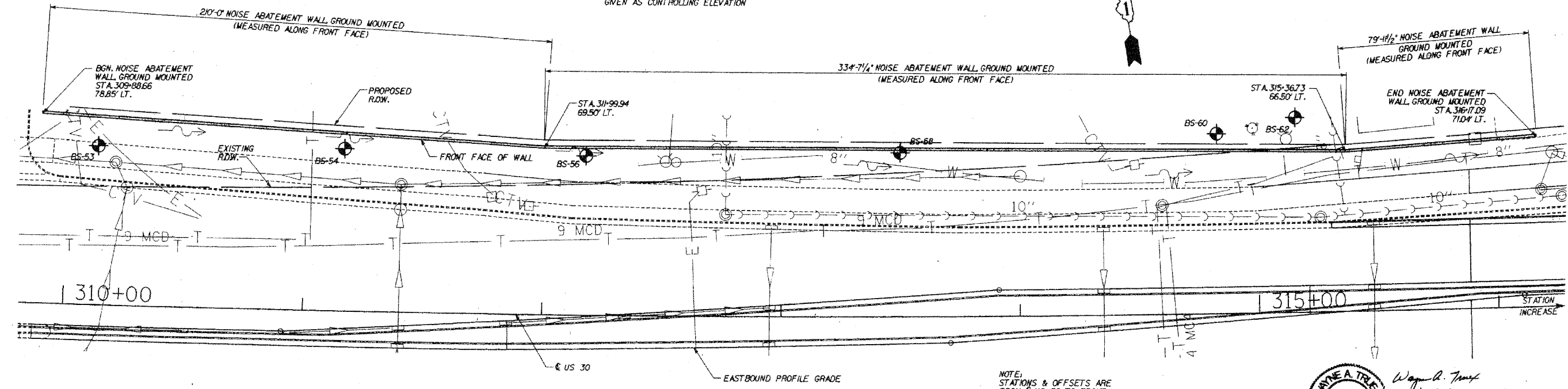


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	756
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* SHEET 12 & 13 WRS-3		* CONTRACT NO. 05479		

BENCH MARK: BM 231,  
STA. 317+94.43, 58.838' LT., ELEV. 720.98  
SET SQUARE ON CURB IN FRONT OF FRANKFORT TWP BUILDING,  
NORTH SIDE OF ROUTE 30.



**ELEVATION**  
(LOOKING @ FRONT FACE)  
\* DENOTES BACK FACE ELEVATION  
GIVEN AS CONTROLLING ELEVATION



**PLAN**

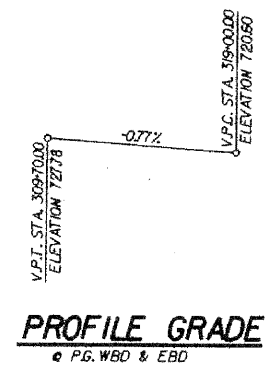
NOTE:  
STATIONS & OFFSETS ARE  
FROM E US 30 TO FRONT  
FACE OF WALL

**TOTAL BILL OF MATERIALS**

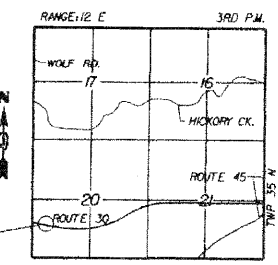
ITEM	UNIT	QUANTITY
NOISE ABATEMENT WALL GROUND MOUNTED	SQ. FT.	8,389

**CURVE DATA**

PI STA. = 315+74.0  
Δ = 11° 50' 47" (LT)  
D = 0' 32' 44"  
R = 10,500.00'  
T = 1089.38'  
L = 2170.98'  
E = 56.36'  
P.C. STA. = 304+84.72  
P.T. STA. = 326+55.71



**PROFILE GRADE**  
© P.G. WBD & EBD



**LOCATION SKETCH**

**DESIGN SPECIFICATIONS**

AASHTO 2002 SPECIFICATIONS

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP



Wayne A. Trapp  
Office 11-30-10



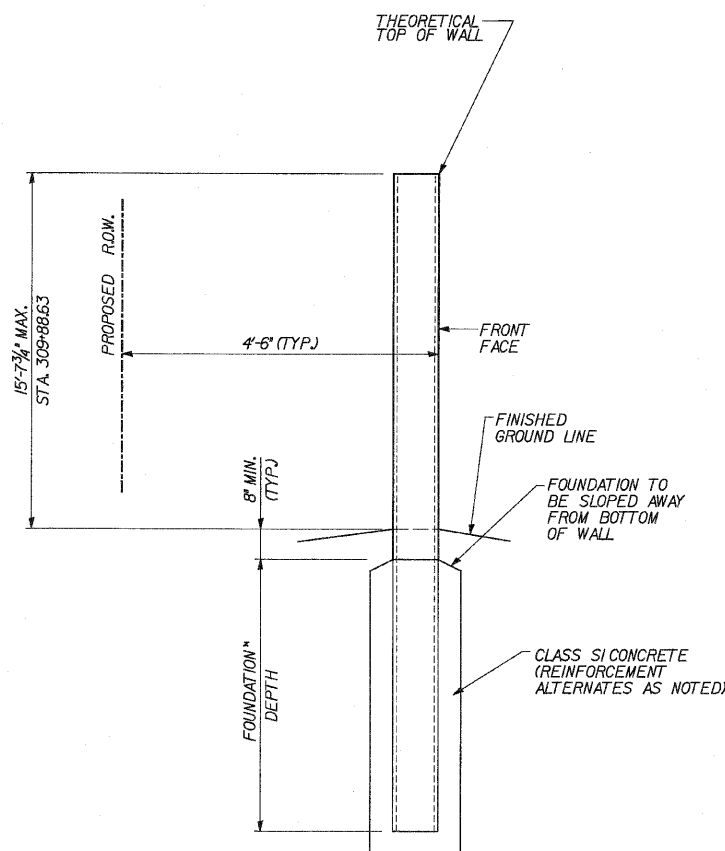
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**NOISE WALL D  
PLAN & ELEVATION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 309+88.63 TO 316+17.14  
WILL COUNTY

REVISIONS	
NAME	DATE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	757
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479



**NOISE ABATEMENT WALL GROUND MOUNTED TYPICAL SECTION**

\* FOUNDATION DEPTH TO BE DETERMINED BY CONTRACTOR.

NOTE: LOW CLEARANCE EQUIPMENT SHOULD BE USED FOR THE INSTALLATION OF THE NOISE WALLS AND THE CONTRACTOR SHOULD COORDINATE THE INSTALLATION WITH THE UTILITY COMPANIES

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL D**  
**TYPICAL SECTIONS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 309+88.63 TO 316+17.14  
WILL COUNTY

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479

**BORING LOG BS-053** Page 1 of 1

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Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 726.42 ft  
North: 1761978.73 ft  
East: 1106410.81 ft  
Station: 310+12.73  
Offset: 66.21 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blwf in)	Qc (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blwf in)	Qc (tsf)	Moisture Content (%)
726.4	12-inch thick, black SILTY CLAY LOAM								Boring terminated at 25.00 ft						
	Very stiff to hard, brown, mottled CLAY	1		5	4.50	19									
		2		6	4.00	16									
		3		3	3.75	16									
718.4	Very stiff to hard, brown CLAY to SILTY CLAY	4		5	4.50	16									
		5		4	3.50	17									
		6		3	3.50	14									
710.2	Loose to medium dense, gray SILT	7		4	NP	15									
716.9	Hard, gray CLAY to SILTY CLAY	8		4	NP	14									
716.5	Medium dense, brown, fine SAND to SANDY LOAM	9		5	4.00	13									
716.2	Very stiff to hard, gray CLAY to SILTY CLAY	10		4	2.75	15									
714.4		25		4											

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-12-2003	Complete Drilling	03-12-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	DRY	
Driller	C&J	Logger	S. Patel	Time After Drilling	NA		
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

**BORING LOG BS-054** Page 1 of 1

Wang Engineering, INC.  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 726.07 ft  
North: 1761961.41 ft  
East: 1106511.93 ft  
Station: 311+15.96  
Offset: 67.74 LT

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blwf in)	Qc (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blwf in)	Qc (tsf)	Moisture Content (%)
726.6	6-inch thick, black SILTY CLAY LOAM								Boring terminated at 25.00 ft						
	Very stiff to hard, brown and gray CLAY to SILTY CLAY	1		5	4.50	15									
		2		4	4.50	17									
		3		5	3.25	17									
718.1	Hard, brown CLAY	4		6	4.50	15									
715.6	Very stiff, gray CLAY to SILTY CLAY	5		5	2.25	16									
		6		4	2.25	15									
		7		4	2.00	15									
		8		4	2.25	15									
		9		3	2.00	15									
		10		3	2.00	15									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-12-2003	Complete Drilling	03-12-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	DRY	
Driller	C&J	Logger	S. Patel	Time After Drilling	NA		
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	▽	NA	
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.							

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL D  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION 12 & 13 WRS-3  
STATION 309+88.63 TO 316+17.14  
WILL COUNTY



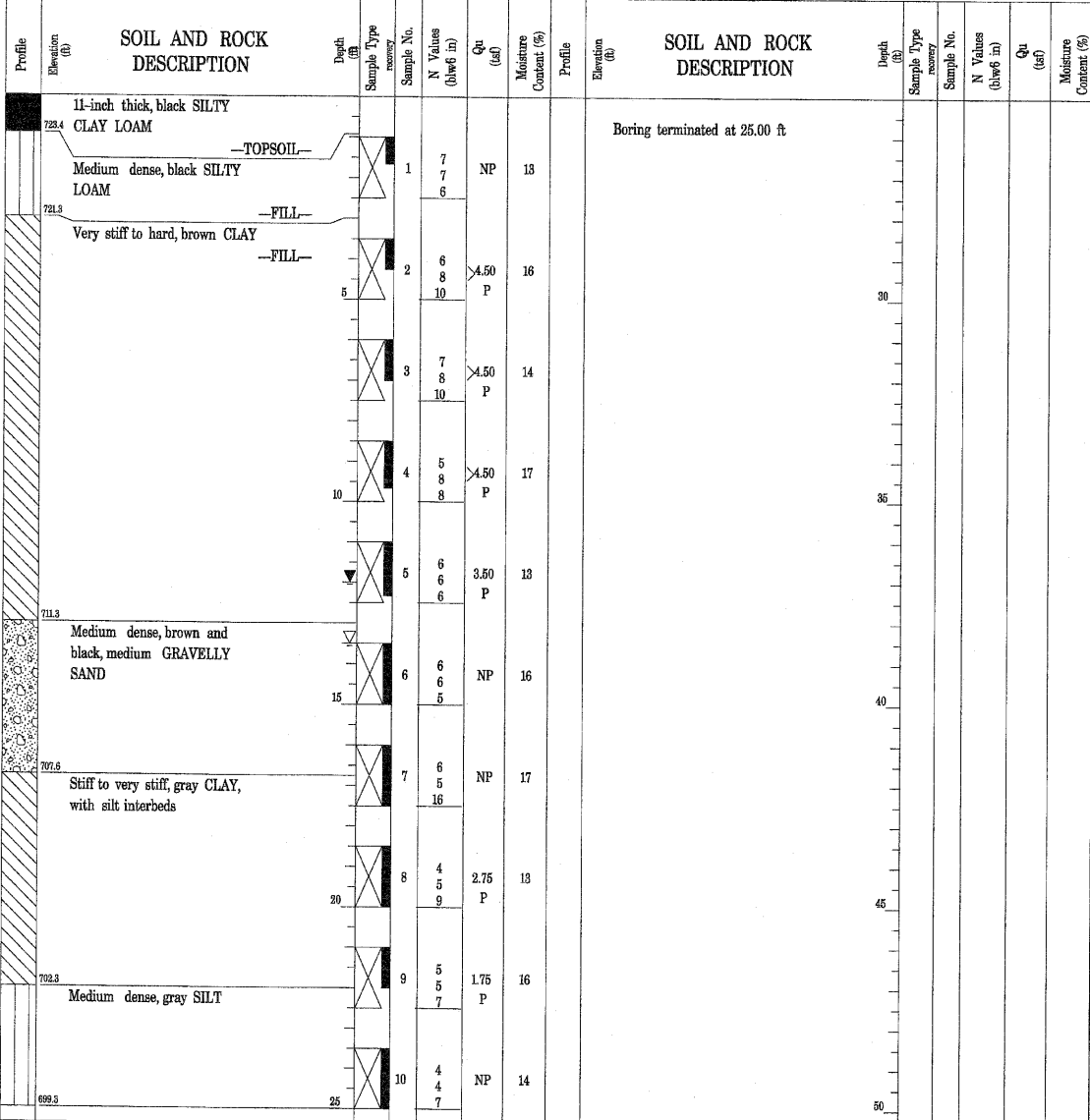
\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
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100 Fairbank Street  
Addison, IL 60101  
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**BORING LOG BS-060**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 724.30 ft  
North: 1761910.02 ft  
East: 1106872.39 ft  
Station: 314+82.51  
Offset: 75.24 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



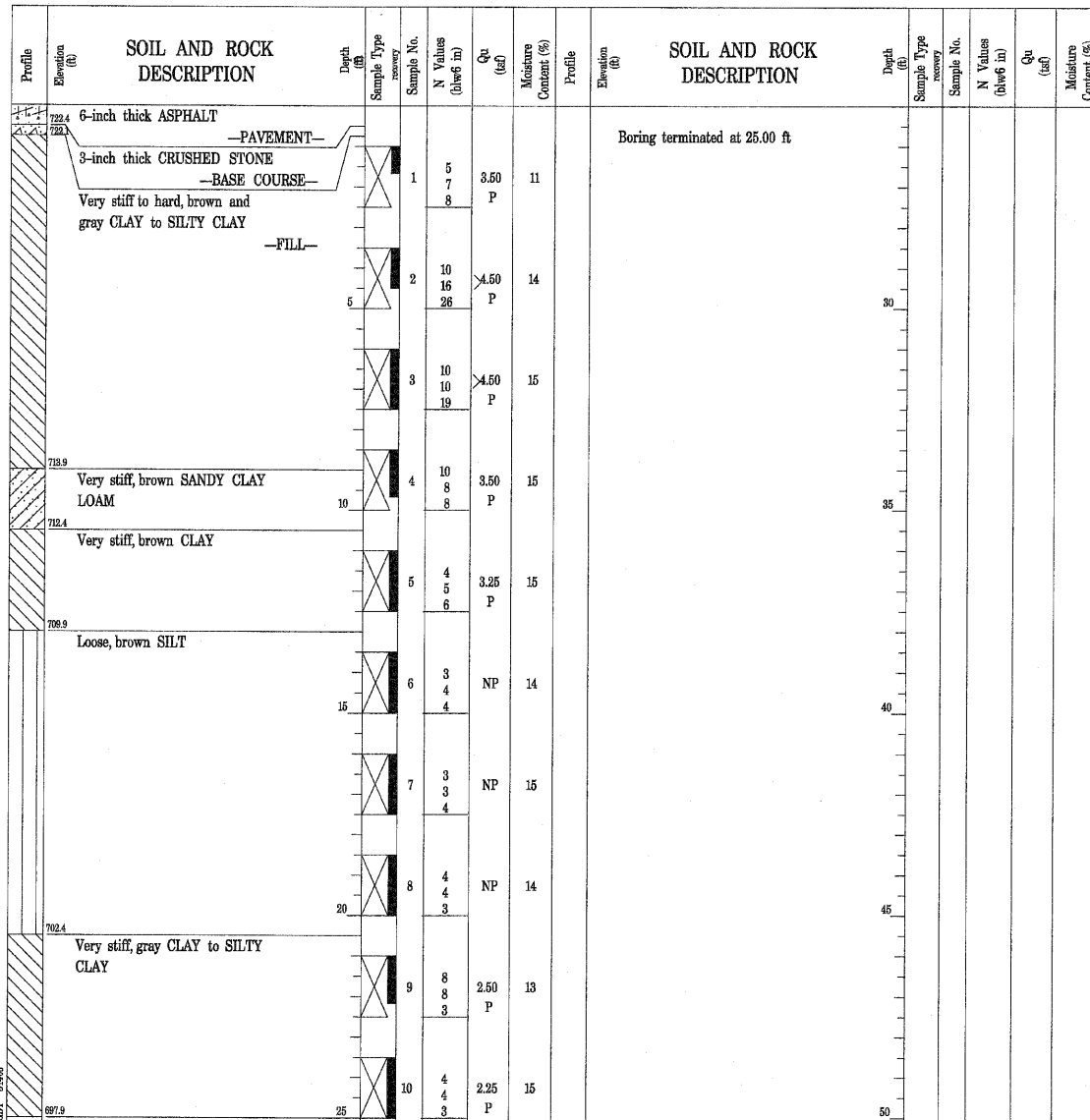
GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	09-12-2003	Complete Drilling	03-12-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	S. Patel
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	NA
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

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**BORING LOG BS-062**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 722.88 ft  
North: 1761897.87 ft  
East: 1107004.01 ft  
Station: 316+15.54  
Offset: 81.37 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	03-12-2003	Complete Drilling	03-12-2003
Drilling Contractor	TSC	Drill Rig	CME 75 TMR
Driller	C&J	Logger	S. Patel
Checked by	S. Janowski	Time After Drilling	NA
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion	Depth to Water	NA
		The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.	

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL D  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 309+88.63 TO 316+17.14  
WILL COUNTY

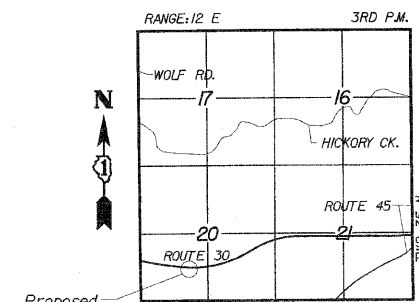
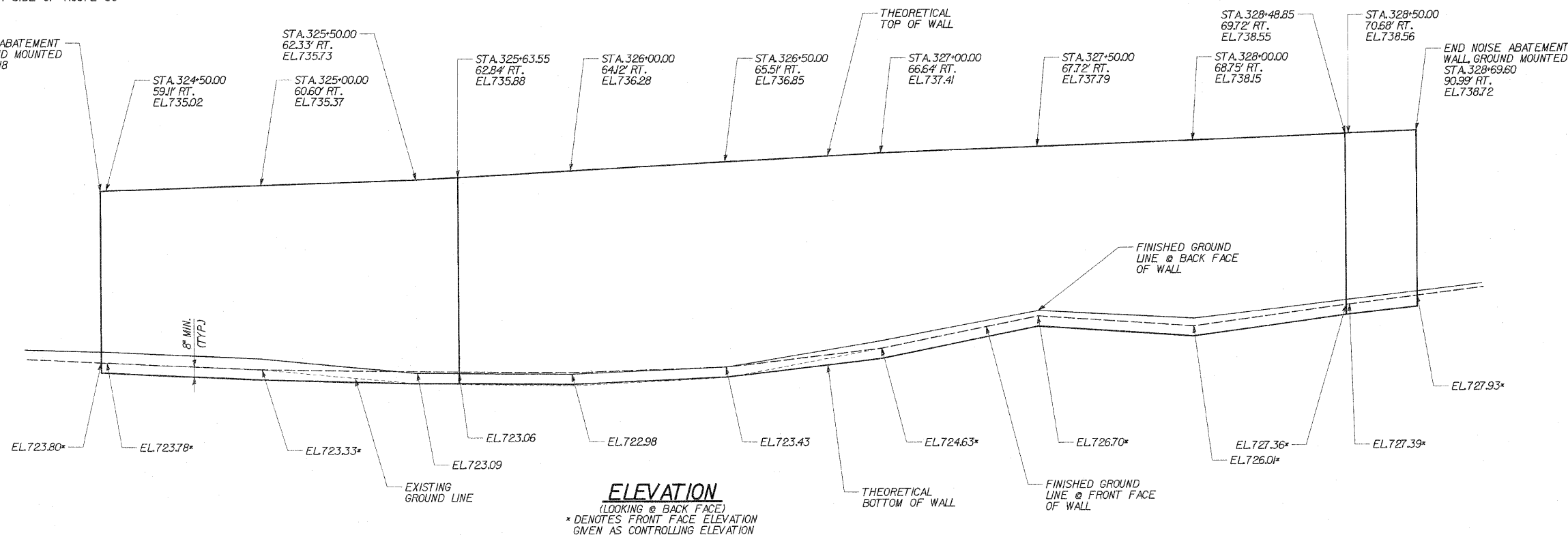
BENCH MARK: BM 233  
 STA. 332+19.643, 68.368' LT., ELEV. 725.377  
 SET RAILROAD SPIKE IN SOUTH FACE OF  
 POWER POLE OPPOSITE 'ABE LINCOLN MOTEL'  
 ENTRANCE, NORTH SIDE OF ROUTE 30

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

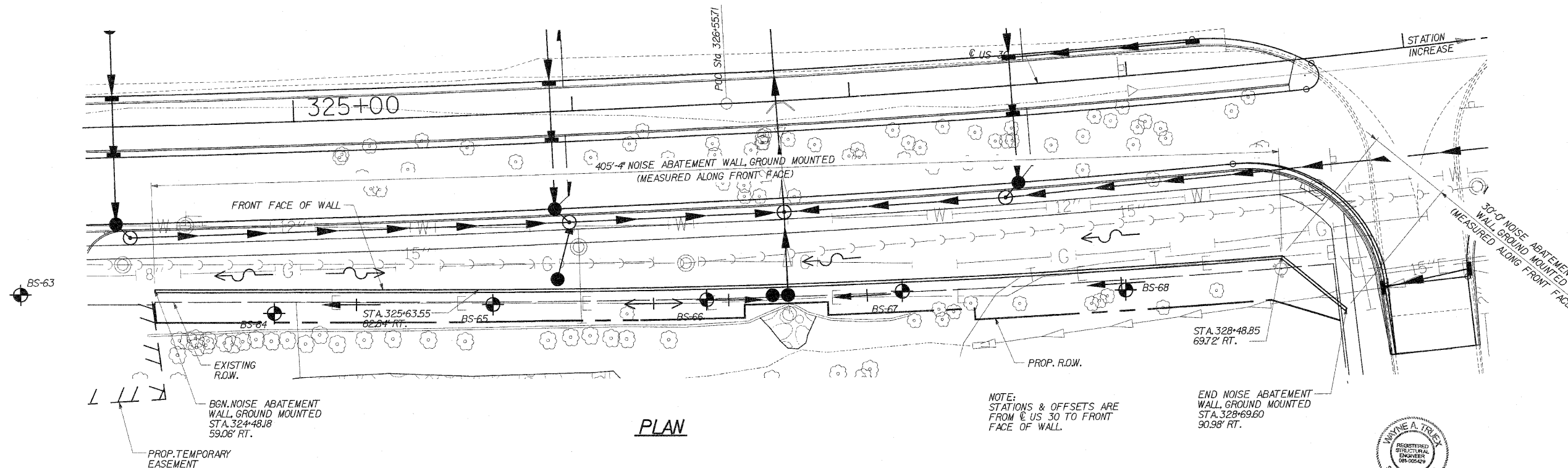
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	761
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

\* SECT. 12 & 13) WRS-3  
 \* CONTRACT NO. 62479

SHEET NO. 1  
 5 SHEETS



LOCATION SKETCH



NOTE:  
 STATIONS & OFFSETS ARE  
 FROM @ U.S. 30 TO FRONT  
 FACE OF WALL.

END NOISE ABATEMENT  
 WALL, GROUND MOUNTED  
 STA. 328+69.60  
 90.98' RT.

**CURVE DATA**

PI STA. = 315+74.10	PI STA. = 339+67.40
Δ = 17° 50' 47" (LT)	Δ = 36° 18' 40" (LT)
D = 0' 32' 44"	D = 1' 25' 57"
R = 10,500.00'	R = 4,000.00'
T = 1,089.38'	T = 1,311.69'
L = 2,170.98'	L = 2,534.98'
E = 56.36'	E = 209.58'
P.C. STA. = 304+84.72	P.C. STA. = 326+55.71
P.T. STA. = 326+55.71	P.T. STA. = 351+90.69

**DESIGN SPECIFICATIONS**

AASHTO 2002 SPECIFICATIONS

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
NOISE ABATEMENT WALL, GROUND MOUNTED	SQ. FT.	5,617



**DLZ** 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005  
 DLZ Illinois, Inc.

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**PROFILE GRADE**

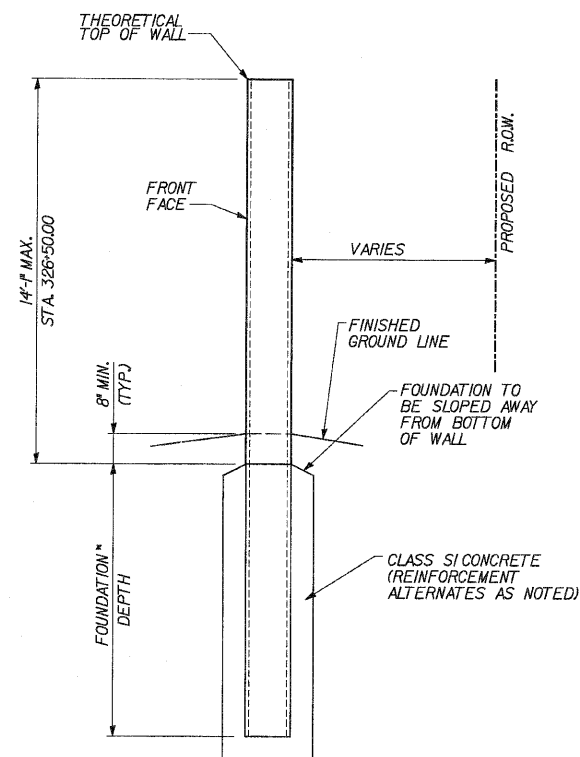
@ P.G.WBD. & EBD.

REVISIONS	
NAME	DATE

**NOISE WALL E**  
**PLAN & ELEVATION**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 324+48.18 TO 328+69.60  
 WILL COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	762
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479



**NOISE ABATEMENT WALL GROUND MOUNTED TYPICAL SECTION**

\* FOUNDATION DEPTH TO BE DETERMINED BY CONTRACTOR.

NOTE: LOW CLEARANCE EQUIPMENT SHOULD BE USED FOR THE INSTALLATION OF THE NOISE WALLS AND THE CONTRACTOR SHOULD COORDINATE THE INSTALLATION WITH THE UTILITY COMPANIES

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL E  
TYPICAL SECTIONS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 324+48.18 TO 328+69.60  
WILL COUNTY

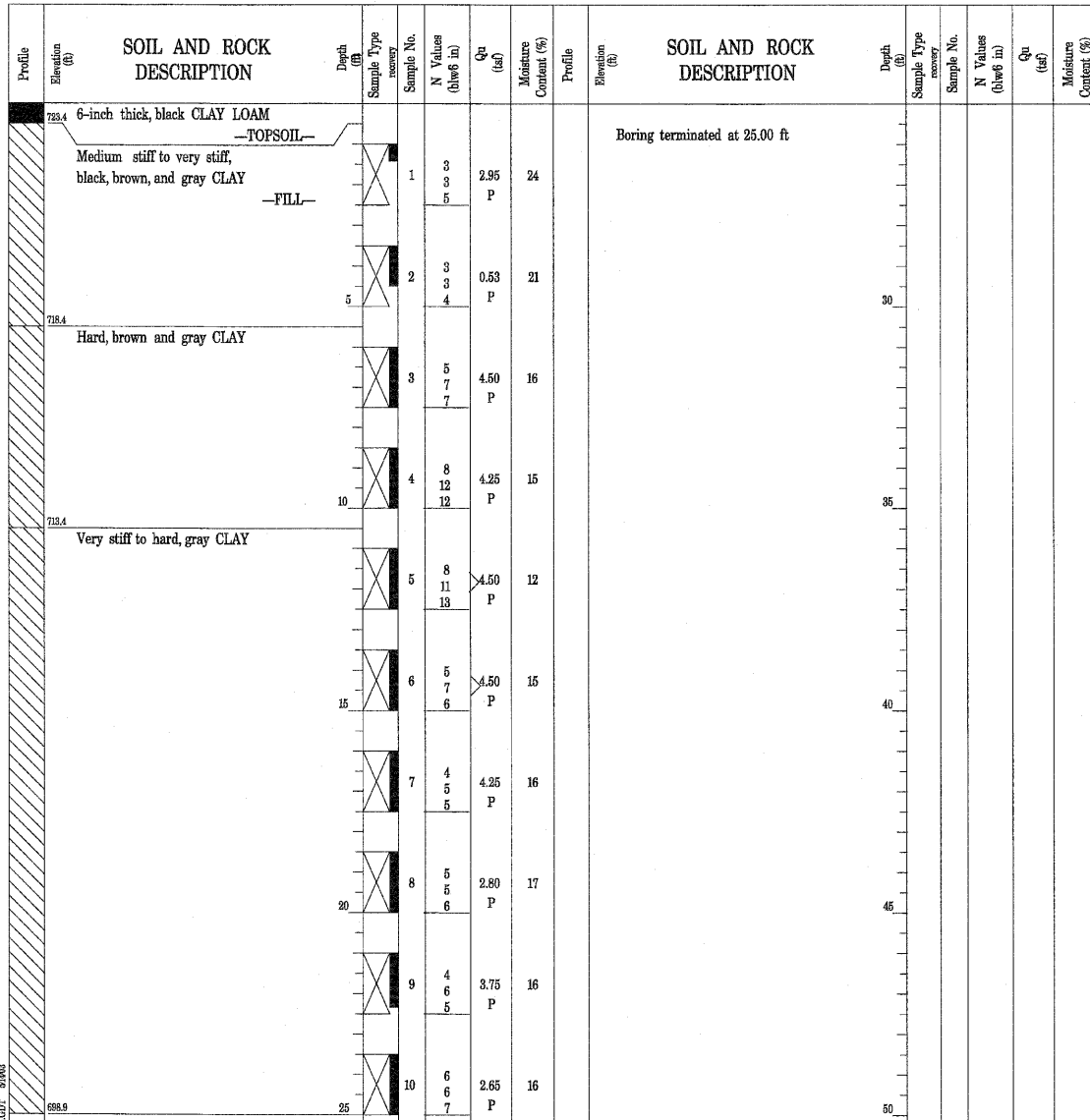
REVISIONS	
NAME	DATE

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-063**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 723.93 ft  
North: 1761681.98 ft  
East: 1107776.93 ft  
Station: 324+6.33  
Offset: 60.78 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	01-22-2003	Complete Drilling	01-22-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR	At Completion of Drilling	∇	DRY	
Driller	F&A	Logger	J. Kasnick	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	NA	

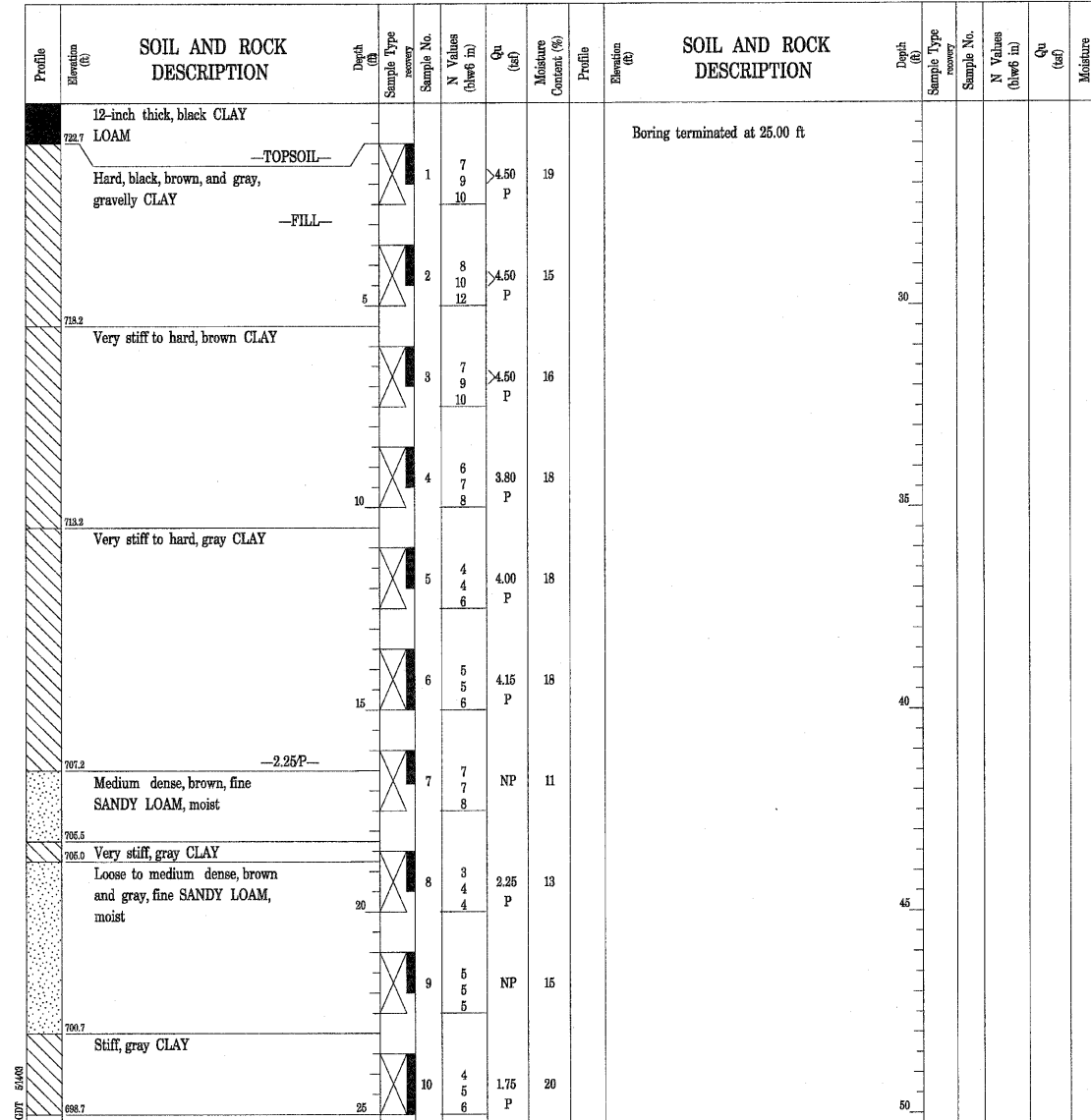
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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Fax: 630 458-0900

**BORING LOG BS-064**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 723.74 ft  
North: 1761689.46 ft  
East: 1107861.06 ft  
Station: 324+90.49  
Offset: 68.85 RT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	01-22-2003	Complete Drilling	01-22-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR	At Completion of Drilling	∇	DRY	
Driller	F&A	Logger	J. Kasnick	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	NA	

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

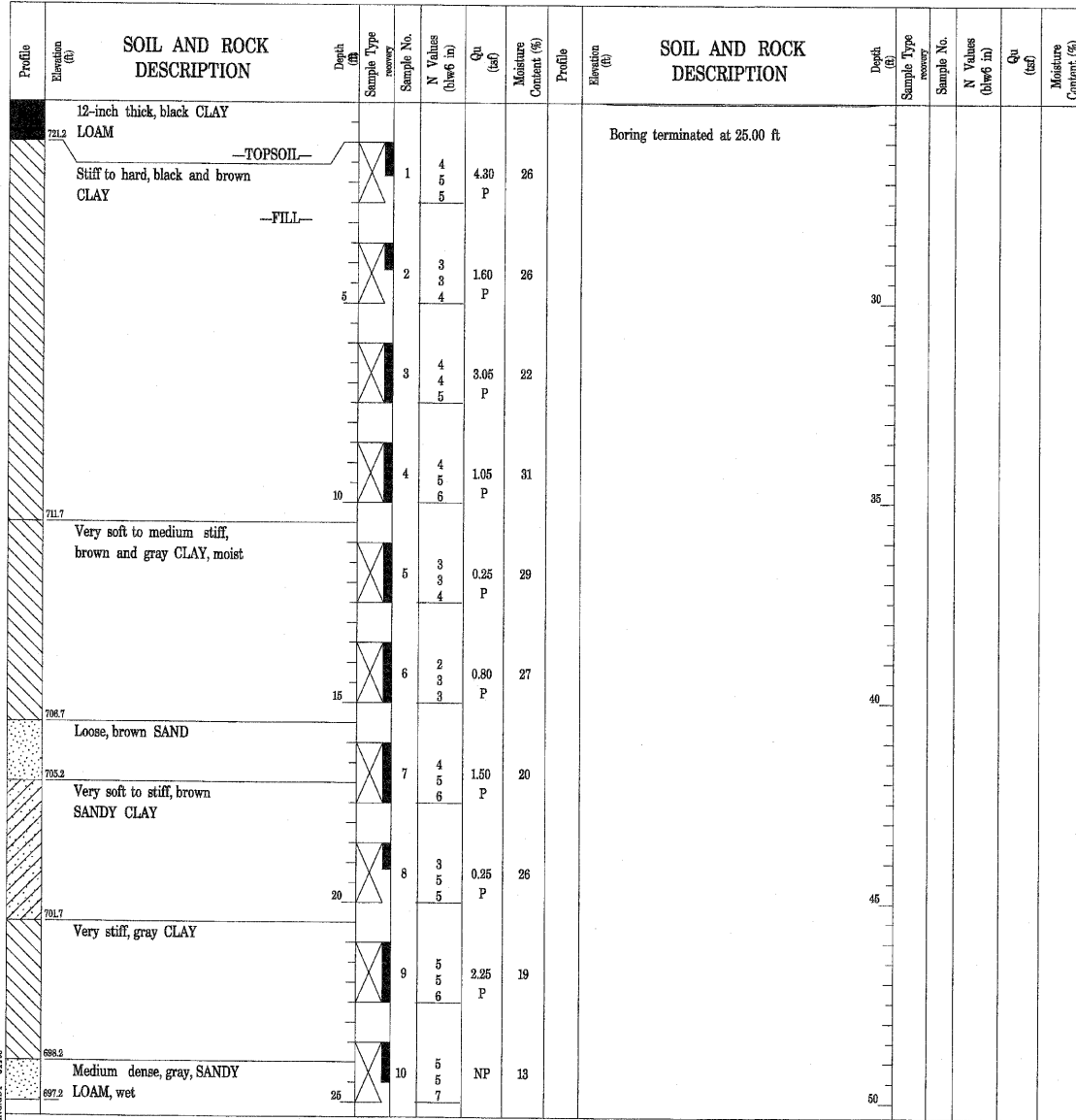
**NOISE WALL E  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 324+4818 TO 328+69.60  
WILL COUNTY



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Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-065**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 722.20 ft  
North: 1761666.36 ft  
East: 1107989.40 ft  
Station: 325+68.37  
Offset: 68.41 RT

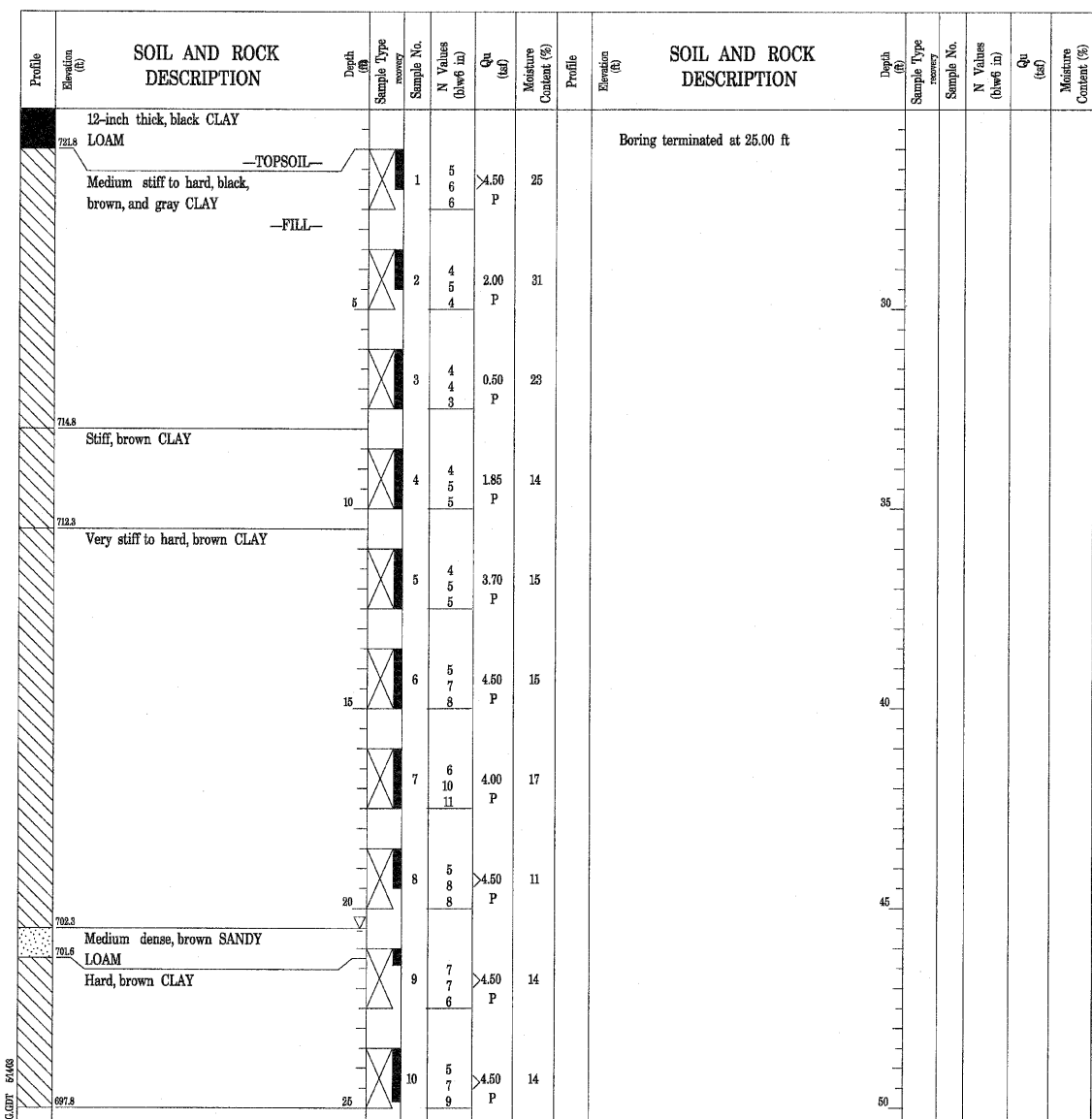


GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-22-2003	Complete Drilling	01-22-2003
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion
While Drilling	▽	DRY	
At Completion of Drilling	▽	DRY	
Time After Drilling	NA	Depth to Water	▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

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**BORING LOG BS-066**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 722.83 ft  
North: 1761661.65 ft  
East: 1108916.29 ft  
Station: 326+44.88  
Offset: 70.22 RT



GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	01-22-2003	Complete Drilling	01-22-2003
Drilling Contractor	TSC	Drill Rig	MOBILE 144 TMR
Driller	F&A	Logger	J. Kasnick
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion
While Drilling	▽	20.50 ft	
At Completion of Drilling	▽	NA	
Time After Drilling	NA	Depth to Water	▽ NA
The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

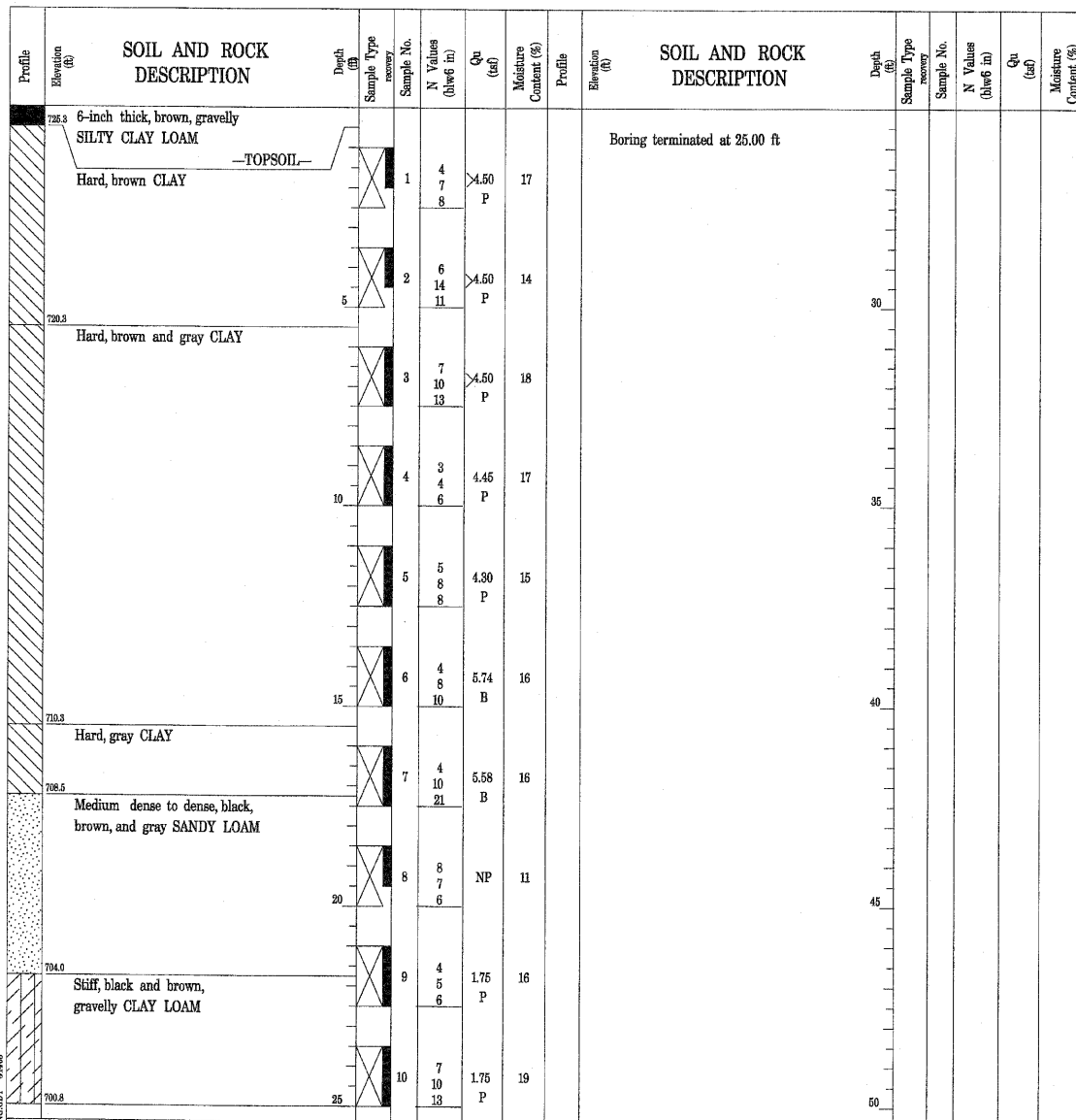
**NOISE WALL E  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 324+48.18 TO 328+69.60  
WILL COUNTY

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**BORING LOG BS-067**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 726.78 ft  
North: 1761658.88 ft  
East: 1108086.56 ft  
Station: 327+14.13  
Offset: 71.10 RT

Page 1 of 1



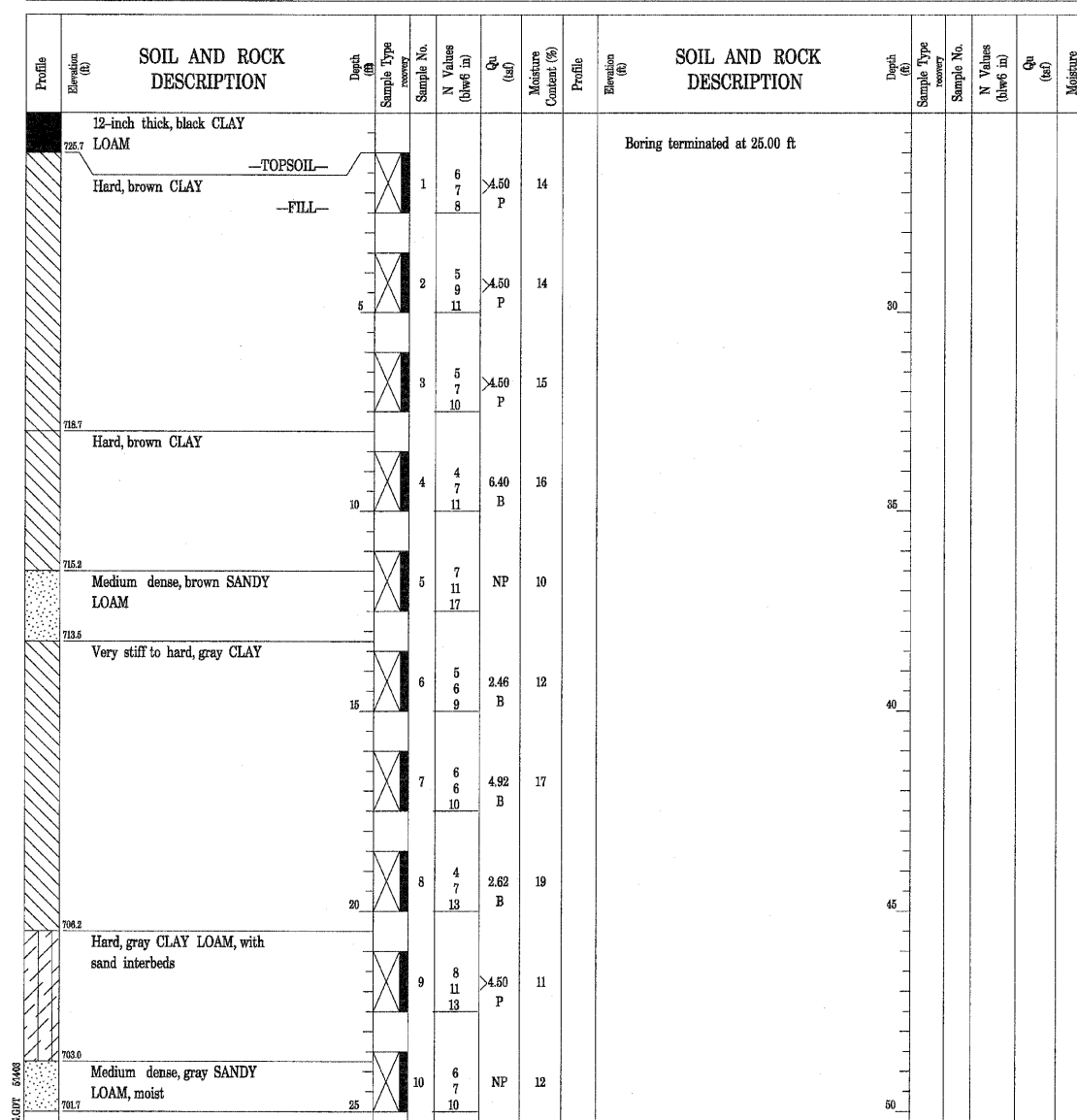
GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-07-2003	Complete Drilling	02-07-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	∇	DRY	
Driller	E&A	Logger	J. Kasnick	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	NA	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

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**BORING LOG BS-068**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 726.71 ft  
North: 1761652.53 ft  
East: 1108166.81 ft  
Station: 327+92.94  
Offset: 76.75 RT

Page 1 of 1



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-10-2003	Complete Drilling	02-10-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	∇	DRY	
Driller	E&A	Logger	E. Oancea	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	∇	NA	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

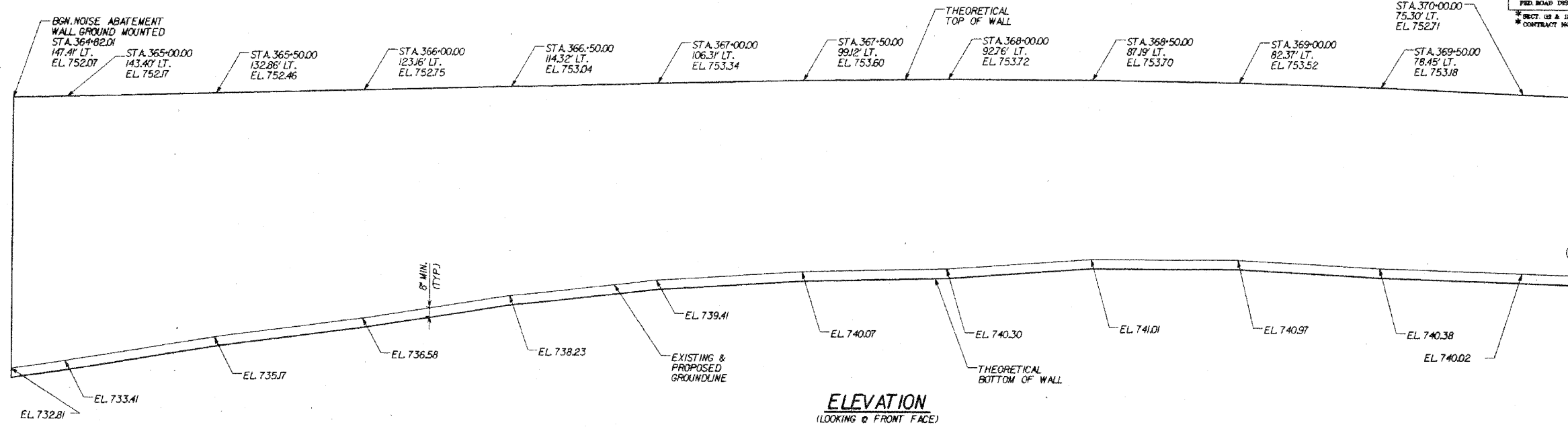
**NOISE WALL E  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 324+48.18 TO 328+69.60  
WILL COUNTY

BENCH MARK: BM 239,  
 STA. 369+09.026, 35.059' LT., ELEV. 739.727  
 SET 1/2" DIAMETER IRON ROD 1/2" NORTH  
 OF BIKE PATH ON THE NORTH SIDE OF  
 ROUTE 30, 1/2" EAST OF ELSNER ROAD.

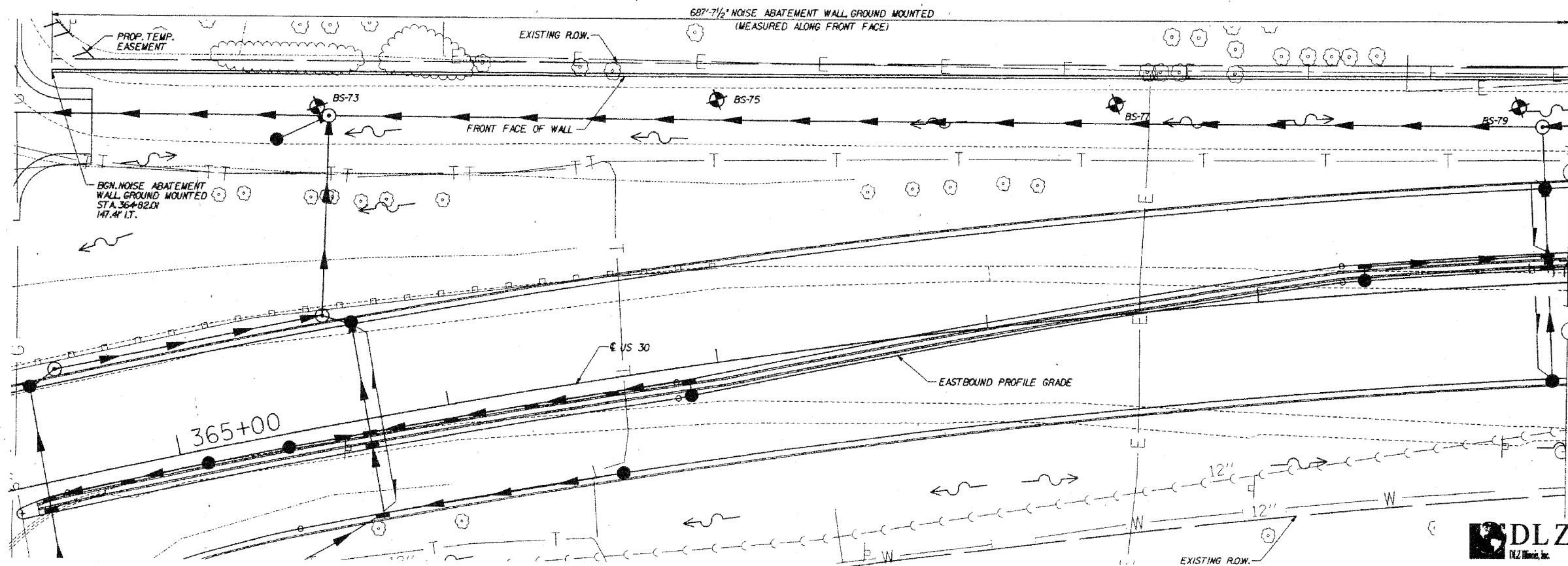
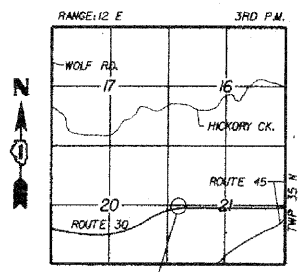
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	766
FED. ROAD DIST.	BLADWYN	FED. AID PROJECT		

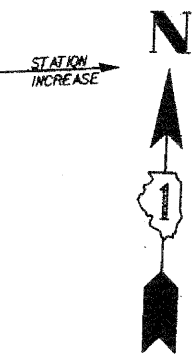
SHEET NO. 1  
 6 SHEETS



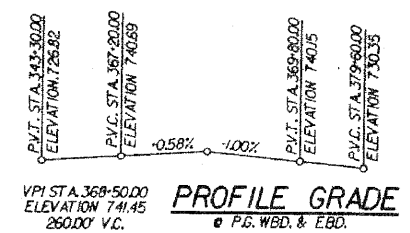
**DESIGN SPECIFICATIONS**  
 AASHTO 2002 SPECIFICATIONS



MATCH LINE @ 370+13.90



DESIGNED	ASP
CHECKED	WSP
DRAWN	BOC
CHECKED	WSP

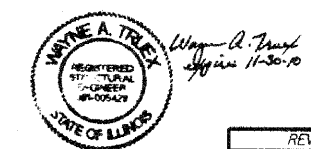


**CURVE DATA**

PI STA.	362+63.70
Δ	32° 58' 28" (RT)
D	1' 45" 17"
R	3,265.00'
T	966.33'
L	1,879.01'
E	140.00'
P.C. STA.	352+97.37
P.T. STA.	371+76.39

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
NOISE ABATEMENT WALL GROUND MOUNTED	SQ. FT.	10,189



**REVISIONS**

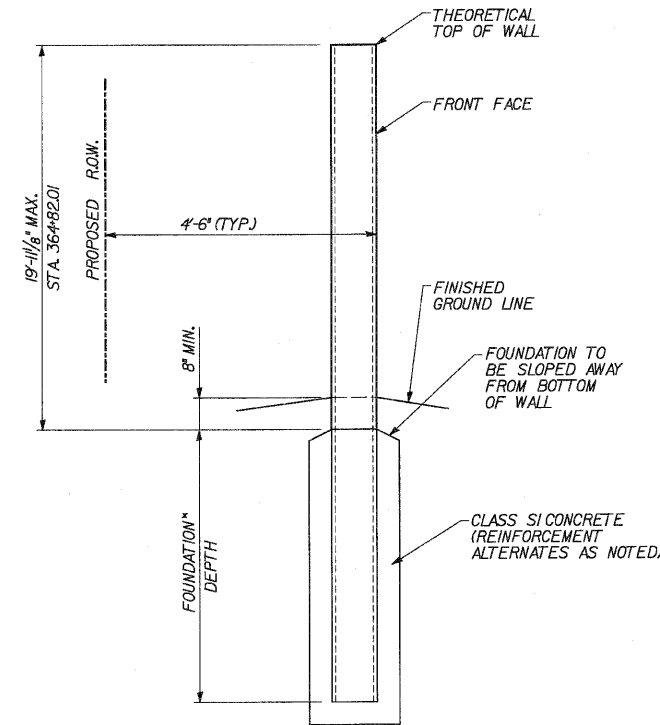
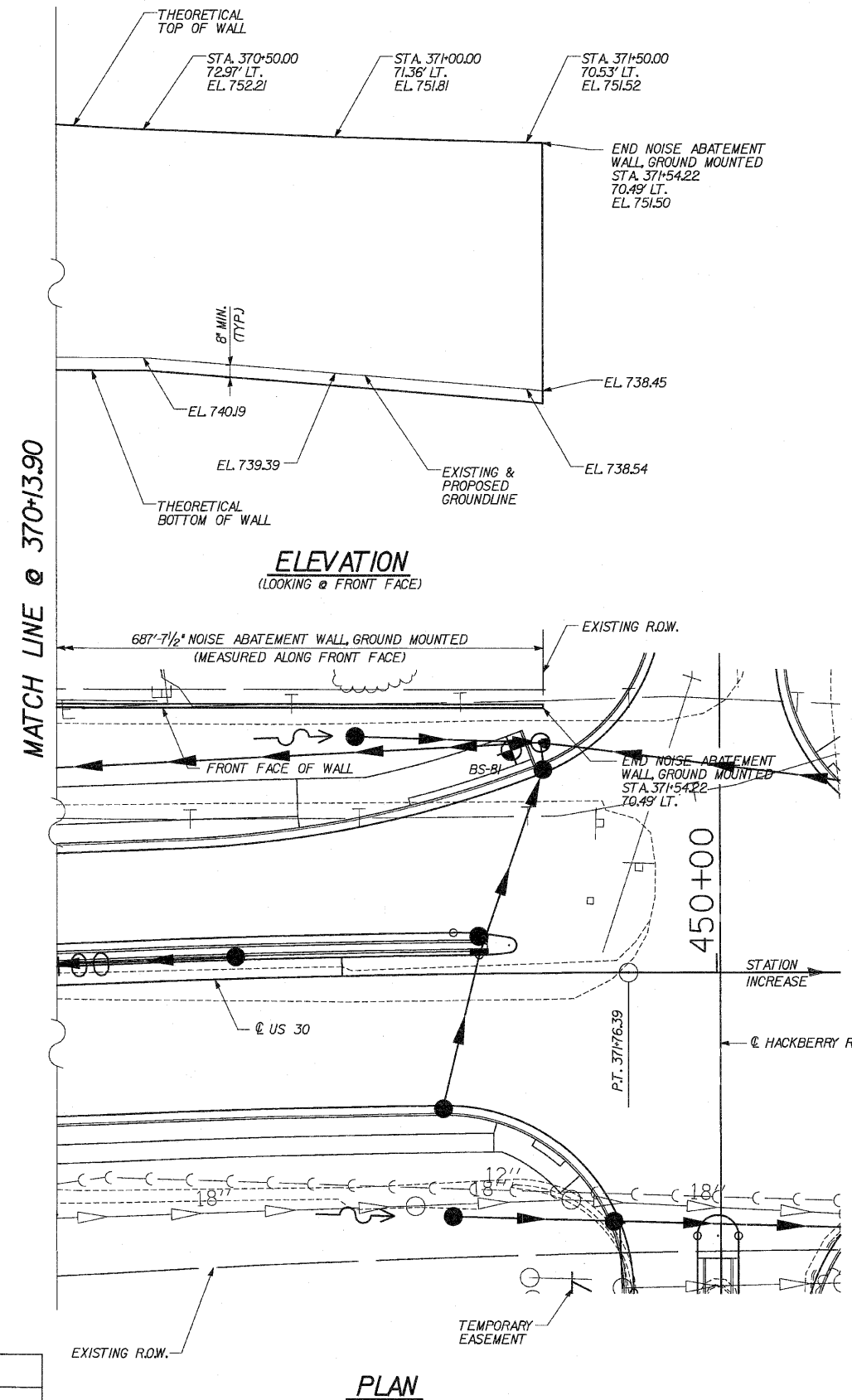
NAME	DATE

**DLZ** 85 W. Algonquin Rd., Ste. 220  
 Arlington Heights, IL 60005

**NOISE WALL F**  
**PLAN & ELEVATION**  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 364+83.13 TO 371+55.34  
 WILL COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	767
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 82479



**NOISE ABATEMENT WALL, GROUND MOUNTED TYPICAL SECTION**

\* FOUNDATION DEPTH TO BE DETERMINED BY CONTRACTOR.

NOTE: LOW CLEARANCE EQUIPMENT SHOULD BE USED FOR THE INSTALLATION OF THE NOISE WALLS AND THE CONTRACTOR SHOULD COORDINATE THE INSTALLATION WITH THE UTILITY COMPANIES



DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

END NOISE WALL  
STA. 371+55.34  
70.48' LT.  
ELEV. 749.49

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL F  
PLAN & ELEVATION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 364+83.13 TO 371+55.34  
WILL COUNTY

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479

**BORING LOG BS-073** Page 1 of 1

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Addison, IL 60101  
Telephone: 630 458-0700  
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WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 736.39 ft  
North: 1763099.60 ft  
East: 1111644.18 ft  
Station: 365+72.78  
Offset: 116.56 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/ft)	Qc (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/ft)	Qc (tsf)	Moisture Content (%)
	735.9	6-inch thick ASPHALT --PAVEMENT--									Boring terminated at 25.00 ft						
	735.4	6-inch thick CRUSHED STONE --BASE COURSE--			1	4 5 7	2.21	22									
		Very stiff, brown CLAY															
	733.4	--FILL-- Hard, brown and gray CLAY			2	4 4 4	4.00	16									
					3	10 11 11	7.54	20									
					4	10 11 18	6.56	19									
	725.9	Hard, brown CLAY			5	9 11 18	6.48	19									
					6	5 5 6	NP	9									
	722.4	Medium dense, brown SANDY LOAM			7	5 5 5	1.89	14									
	720.9	Stiff to very stiff, gray CLAY to SILTY CLAY			8	6 8 8	1.07	13									
					9	6 6 7	2.95	15									
					10	6 7 7	3.20	17									
	711.4																

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-07-2003	Complete Drilling	03-07-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	DRY	
Driller	C&J	Logger	H. Suhail	Time After Drilling	NA		
Checked by	S. Janowski			Depth to Water	▽ NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

**BORING LOG BS-075** Page 1 of 1

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Telephone: 630 458-0700  
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WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 740.00 ft  
North: 1763106.82 ft  
East: 1111790.75 ft  
Station: 367+13.52  
Offset: 96.13 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/ft)	Qc (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blow/ft)	Qc (tsf)	Moisture Content (%)
	738.4	7-inch thick ASPHALT --PAVEMENT--									Boring terminated at 25.00 ft						
	738.9	6-inch thick CRUSHED STONE --BASE COURSE--			1	4 5 5	2.87	21									
		Very stiff, brown and gray CLAY															
	737.0	--FILL-- Hard, brown and gray CLAY			2	5 5 6	4.50	18									
					3	8 8 9	5.90	16									
					4	8 9 10	4.92	16									
					5	9 10 10	7.54	19									
					6	9 9 9	6.64	19									
	724.5	Very stiff, brown CLAY			7	9 9 10	2.62	12									
	722.0	Loose, brown SANDY LOAM			8	4 4 5	1.64	18									
	721.0	Stiff to hard, brown CLAY			9	8 8 9	4.02	18									
					10	7 8 8	3.03	15									
	715.0																

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	03-07-2003	Complete Drilling	03-07-2003	While Drilling	▽	18.00 ft	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	17.00 ft	
Driller	C&J	Logger	H. Suhail	Time After Drilling	NA		
Checked by	S. Janowski			Depth to Water	▽ NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

REVISIONS	
NAME	DATE

**NOISE WALL F  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 364+83.13 TO 371+55.34  
WILL COUNTY

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62478

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Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-077**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 741.03 ft  
North: 1763109.45 ft  
East: 1111937.59 ft  
Station: 368+55.43  
Offset: 77.43 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)
740.5	6-inch thick ASPHALT							Boring terminated at 25.00 ft					
740.0	6-inch thick CRUSHED STONE												
738.0	Hard, brown CLAY		1	5.75	30								
	Very stiff to hard, brown and gray CLAY		2	3.03	18								
			3	8.20	17								
			4	4.43	17								
			5	3.77	18								
728.0	Hard, brown CLAY		6	7.54	16								
725.5	Very stiff to hard, gray CLAY		7	4.92	22								
			8	5.17	19								
			9	3.28	19								
718.0	Medium dense, gray SANDY LOAM		10	2.13	12								
715.5	Very stiff, gray CLAY												

<b>GENERAL NOTES</b>				<b>WATER LEVEL DATA</b>			
Begin Drilling	03-07-2003	Complete Drilling	03-07-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	DRY	
Driller	C&J	Logger	H. Suhail	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	▽	NA	

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

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Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-079**  
WEI Job No.: 301-01-01

Datum: NGVD  
Elevation: 740.49 ft  
North: 1763112.45 ft  
East: 1112065.86 ft  
Station: 370+0.08  
Offset: 65.35 LT

Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blow/ft)	Qu (tsf)	Moisture Content (%)
740.0	6-inch thick ASPHALT							Boring terminated at 25.00 ft					
739.2	8-inch thick CRUSHED STONE												
	Hard, brown and gray CLAY		1	4.50	16								
			2	8.53	16								
			3	9.10	16								
			4	4.84	16								
			5	4.25	19								
727.5	Very stiff to hard, brown CLAY		6	7.05	21								
			7	5.41	20								
			8	2.46	15								
			9	3.20	15								
715.5			10	4.76	14								

<b>GENERAL NOTES</b>				<b>WATER LEVEL DATA</b>			
Begin Drilling	03-07-2003	Complete Drilling	03-07-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▽	DRY	
Driller	C&J	Logger	H. Suhail	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	▽	NA	

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.


DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL F  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 364+83.13 TO 371+55.34  
WILL COUNTY


\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479

 Wang Engineering, Inc. Consulting Geotechnical and Environmental Engineers wangeng3@wangeng.com 100 Fairbank Street Addison, IL 60101 Telephone: 630 458-0700 Fax: 630 458-0900	<b>BORING LOG BS-081</b>		Page 1 of 1
	WEI Job No.: 301-01-01		Datum: NGVD
	Client: <u>Brighton Engineering Company</u>		Elevation: 738.75 ft
	Project: <u>GEOT - US, 30, Will Co, IL, IDOT D-91-219-02</u>		North: 1763114.92 ft
Location: <u>T35N, R11E, Sec 22-24, R12E, Sec 19-21</u>		East: 1112235.53 ft	Station: 371+46.86
		Offset: 59.28 LT	

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
	738.4	4.5-inch thick ASPHALT															
	737.9	6-inch thick CRUSHED STONE															
	735.8	Hard, brown and gray CLAY			1	6 7 7	4.14	21			Boring terminated at 25.00 ft						
		Hard, brown and gray CLAY			2	9 9 10	4.50	19									
		Very stiff to hard, brown CLAY			3	8 9 9	4.67	16									
					4	7 7 7	5.00	16									
					5	10 11 12	9.10	17									
					6	10 10 11	8.04	20									
					7	8 8 9	7.38	18									
					8	7 8 9	2.71	14									
					9	7 7 7	4.43	16									
					10	8 8 9	4.51	15									

<b>GENERAL NOTES</b>				<b>WATER LEVEL DATA</b>			
Begin Drilling	03-07-2003	Complete Drilling	03-07-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 75 TMR	At Completion of Drilling	▼	DRY	
Driller	C&J	Logger	H. Suhail	Time After Drilling	NA		
Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion			Depth to Water	▽	NA	
				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

 **DLZ**  
DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL F  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 364+83.13 TO 371+55.34  
WILL COUNTY

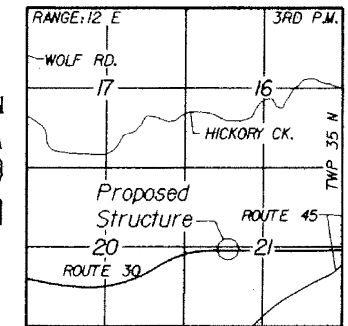
BENCH MARK: BM 240  
 STA. 375+29.53, 55.81' RT., ELEV. 734.45  
 SET SQUARE ON TOP OF CURB AT EASTERLY  
 TIP OF MEDIAN OF ENTRANCE TO  
 'CONTINENTAL PANCAKE' RESTAURANT  
 EXISTING STRUCTURE: NONE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	771
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

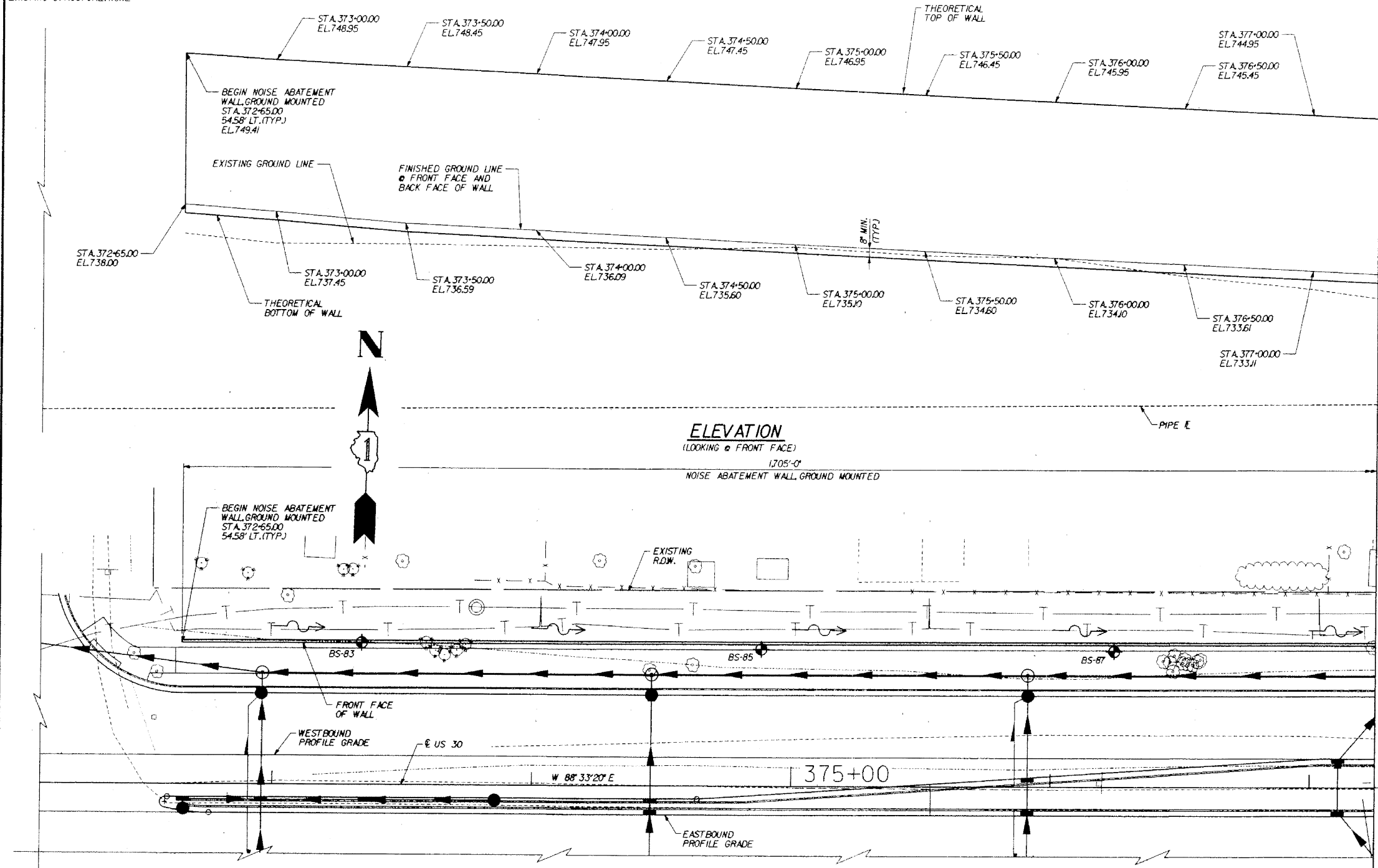
SHEET NO. 1  
 10 SHEETS

TOTAL BILL OF MATERIALS		
ITEM	UNIT	QUANTITY
NOISE ABATEMENT WALL GROUND MOUNTED	SO. FT.	21,505



LOCATION SKETCH

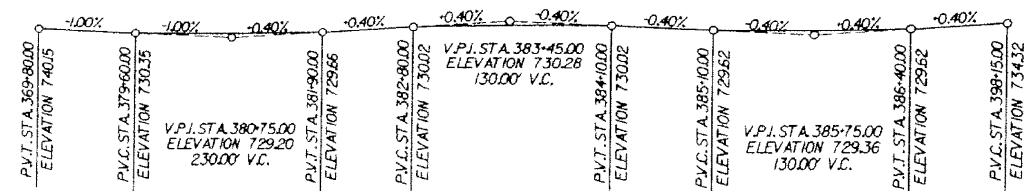
DESIGN SPECIFICATIONS  
 2002 AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES



ELEVATION  
 (LOOKING @ FRONT FACE)  
 1705'-0"  
 NOISE ABATEMENT WALL, GROUND MOUNTED

PLAN

NOTE:  
 STATIONS AND OFFSETS ARE  
 FROM E OF US 30 TO THE FRONT  
 FACE OF WALL



PROFILE GRADE  
 © P.G. WBD & EBD.

MATCH LINE STA. 377+25

STATION INCREASE



Wayne A. Trex  
 11-30-10

DLZ 85 W. Algonquin Rd. Ste. 220  
 Arlington Heights IL 60005

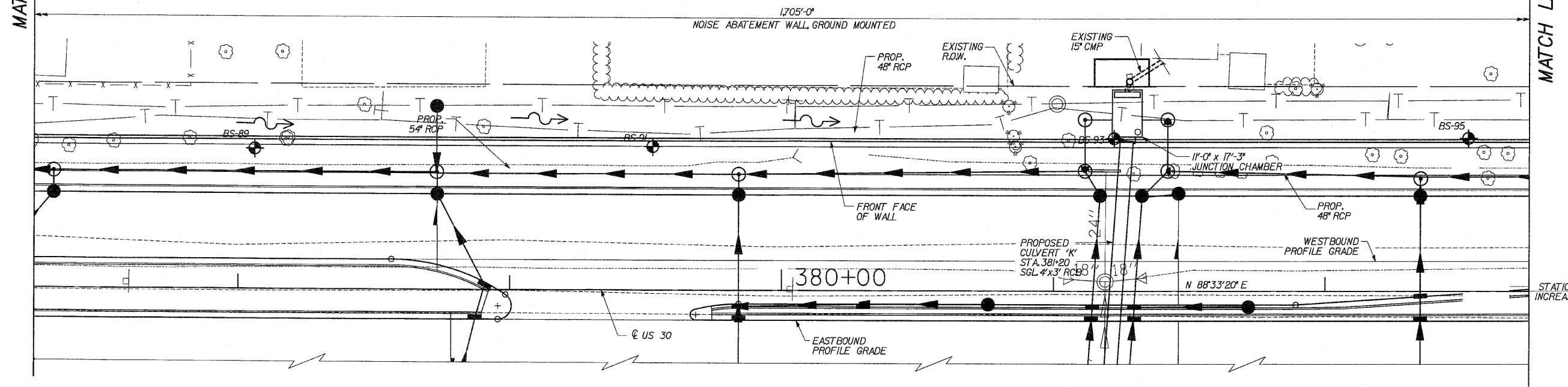
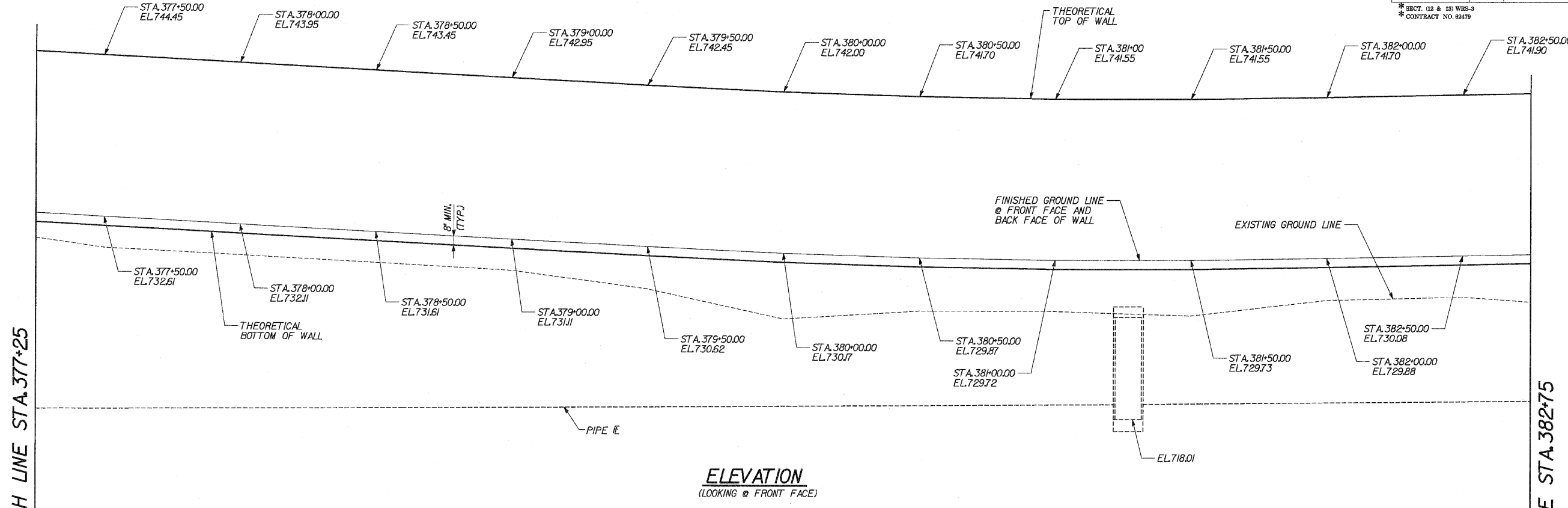
NOISE WALL 'G'  
 GENERAL PLAN I  
 U.S. ROUTE 30 (LINCOLN HIGHWAY)  
 F.A.P. 353 (U.S. 30)  
 SECTION (12 & 13) WRS-3  
 STATION 372+65.00 TO 389+70.00  
 WILL COUNTY

DESIGNED	ASP
CHECKED	WSP
DRAWN	LNB
CHECKED	ASP

REVISIONS	
NAME	DATE



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	772
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	



DESIGNED	ASP
CHECKED	WSP
DRAWN	LNW
CHECKED	ASP

NOTE:  
STATIONS AND OFFSETS ARE FROM C OF US 30 TO THE FRONT FACE OF WALL

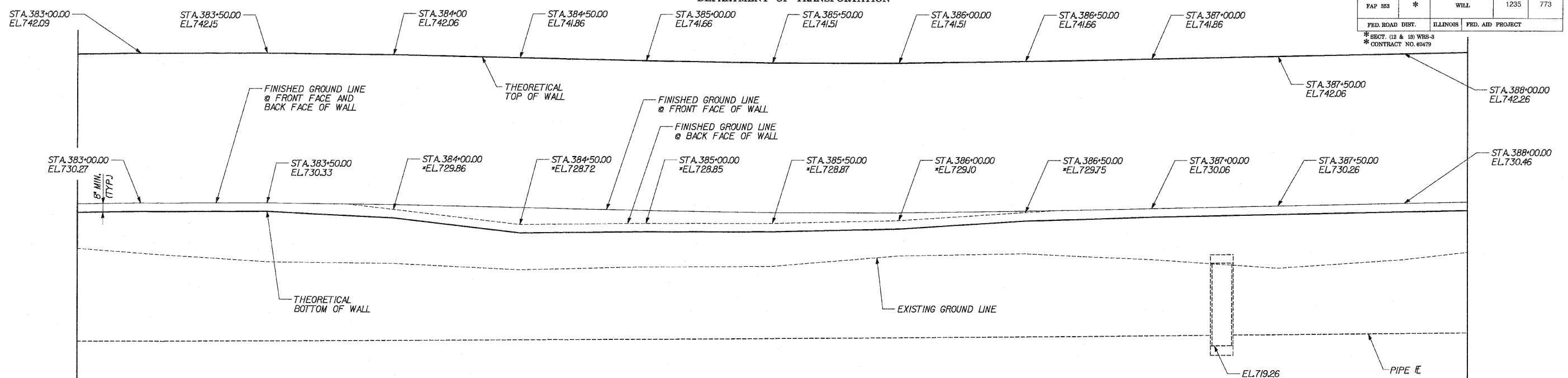
REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL 'G'**  
**GENERAL PLAN II**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	773
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479

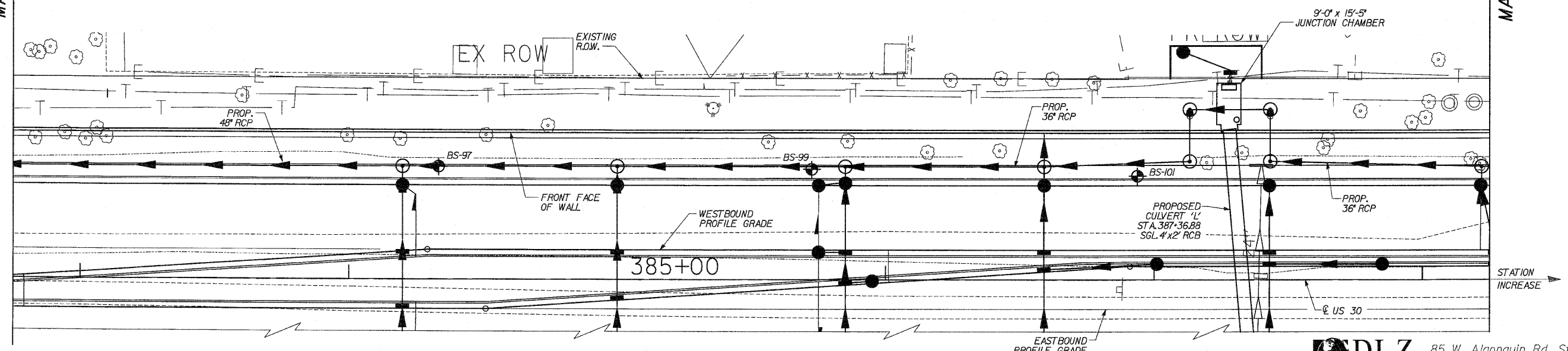


**ELEVATION**  
(LOOKING @ FRONT FACE)  
\* DENOTES BACK FACE ELEVATION GIVEN AS CONTROLLING ELEVATION.

MATCH LINE STA 382+75

MATCH LINE STA 388+25

1705'-0"  
NOISE ABATEMENT WALL, GROUND MOUNTED



**PLAN**

NOTE:  
STATIONS AND OFFSETS ARE FROM @ US 30 TO THE FRONT FACE OF WALL

DESIGNED	ASP
CHECKED	WSP
DRAWN	LNB
CHECKED	ASP

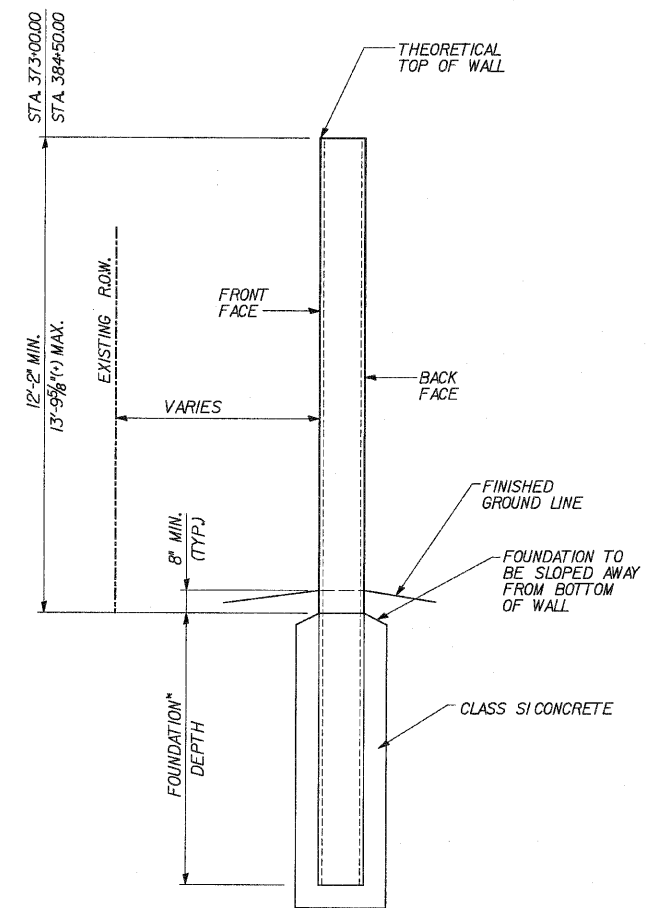
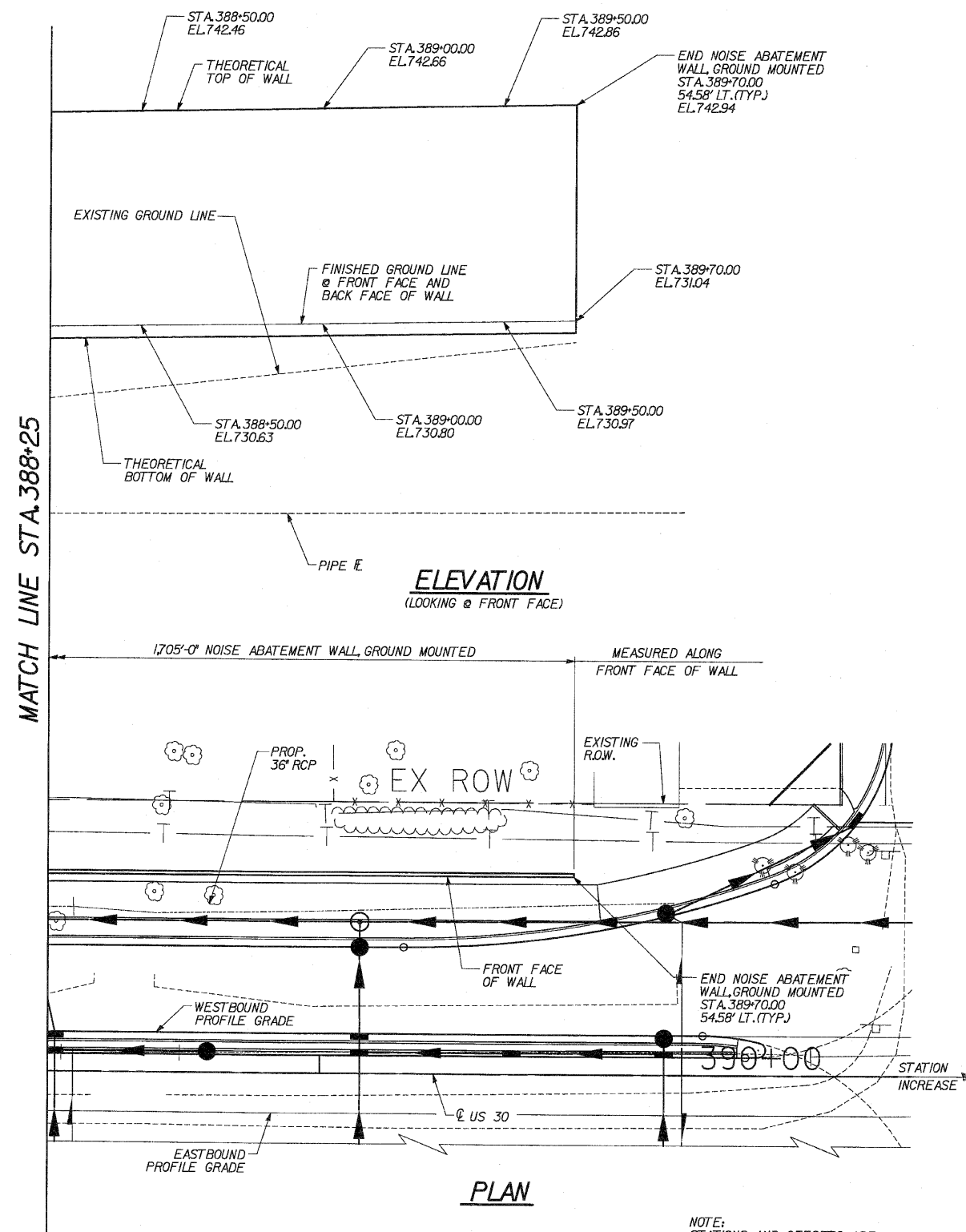
REVISIONS	
NAME	DATE

**DLZ** DLZ Illinois, Inc. 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**NOISE WALL 'G'**  
**GENERAL PLAN III**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	774
FED. ROAD DIST.		ILLINOIS FED. AID PROJECT		

\* SECT. (12 & 13) WRS-3  
\* CONTRACT NO. 62479



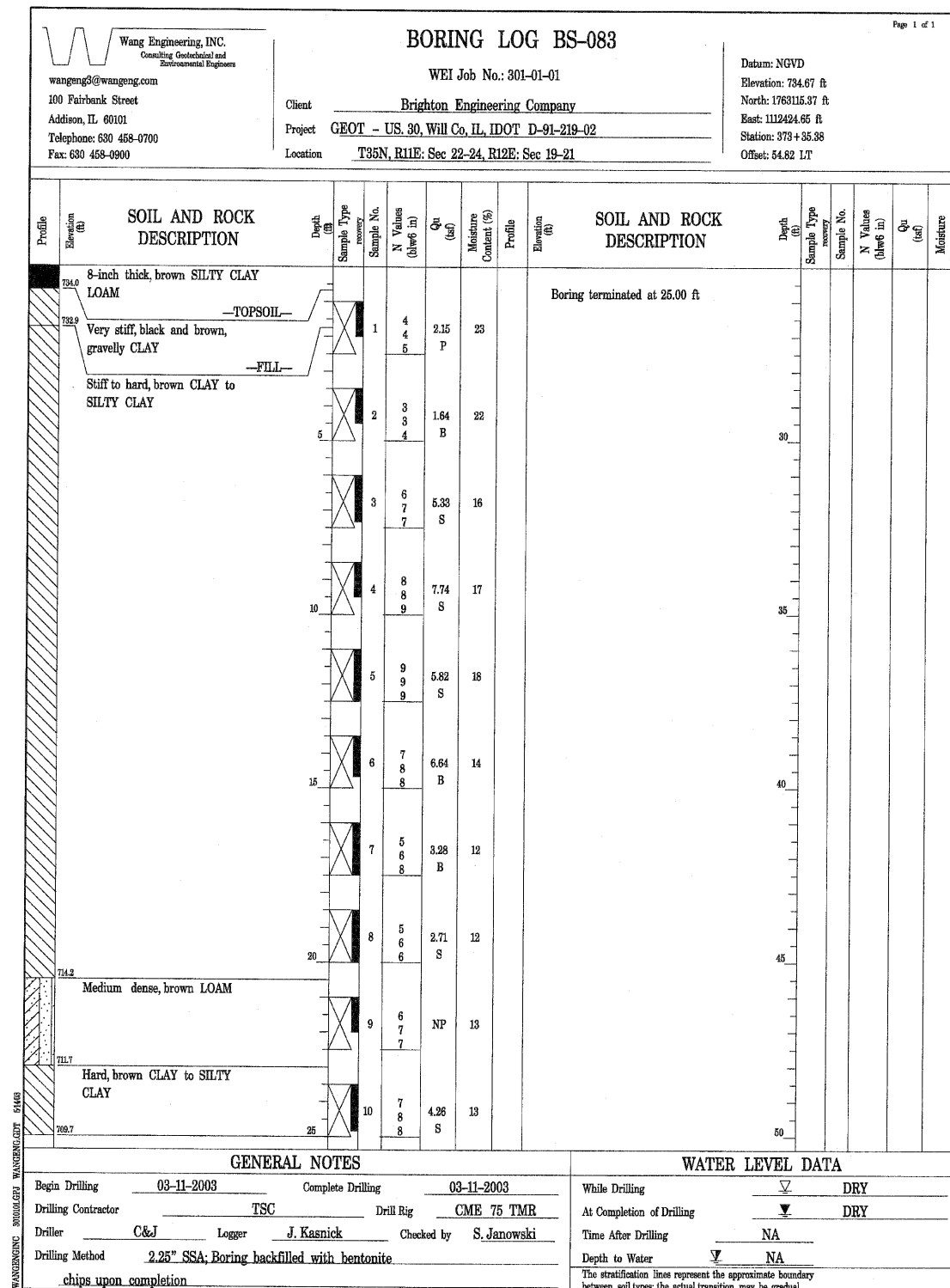
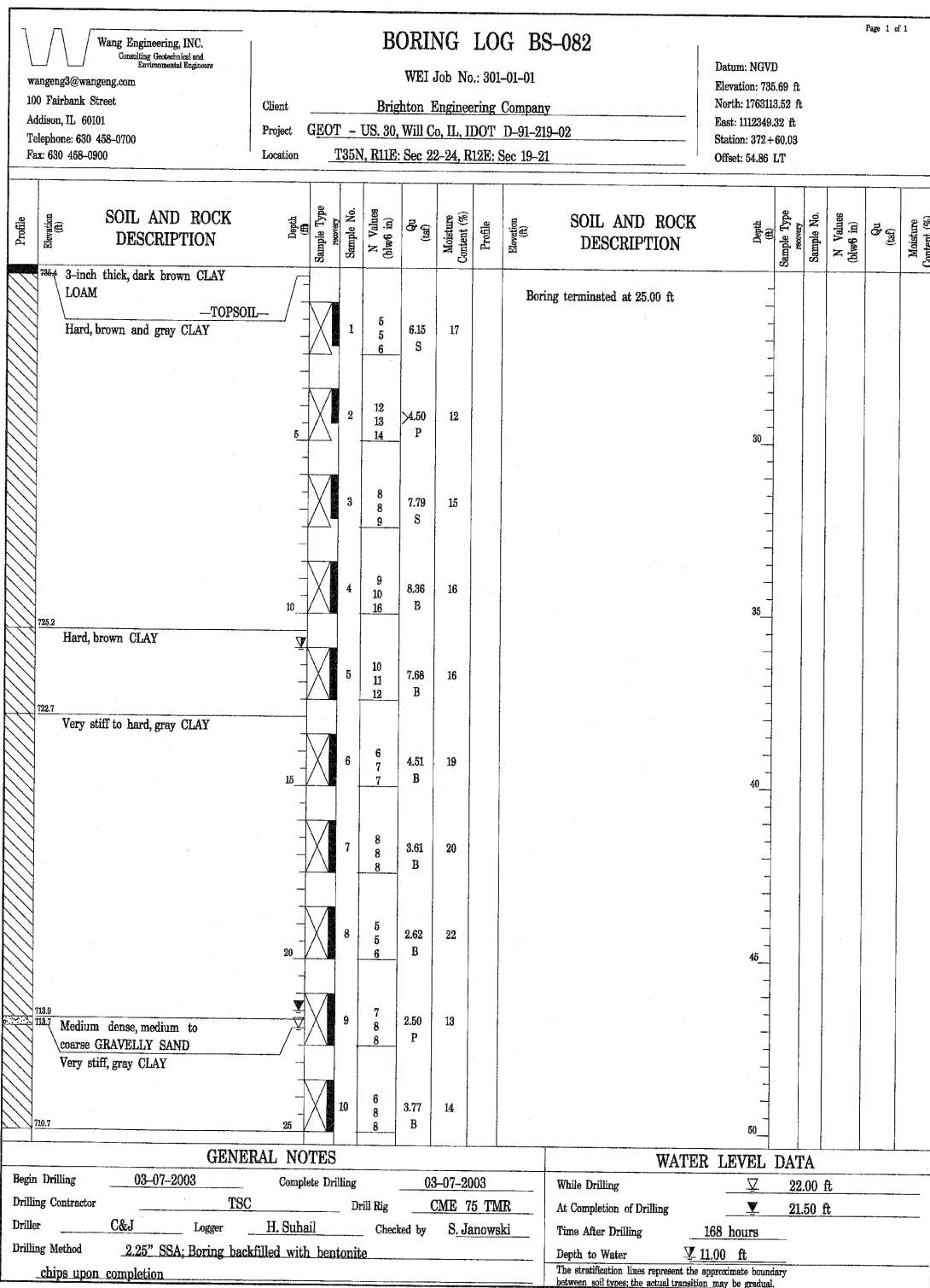
DESIGNED	ASP
CHECKED	WSP
DRAWN	LNB
CHECKED	ASP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL 'G'**  
**GENERAL PLAN IV & DETAILS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479



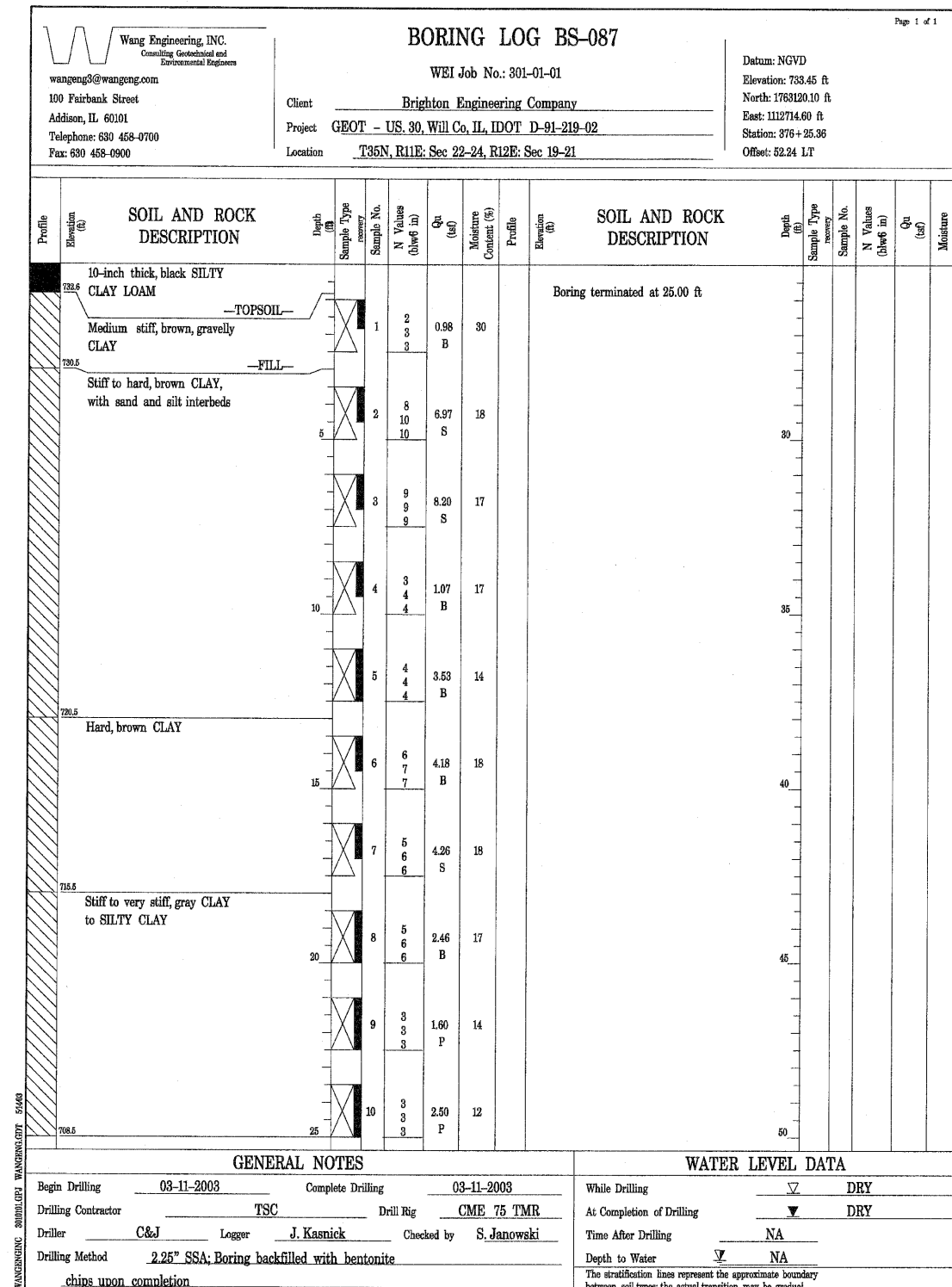
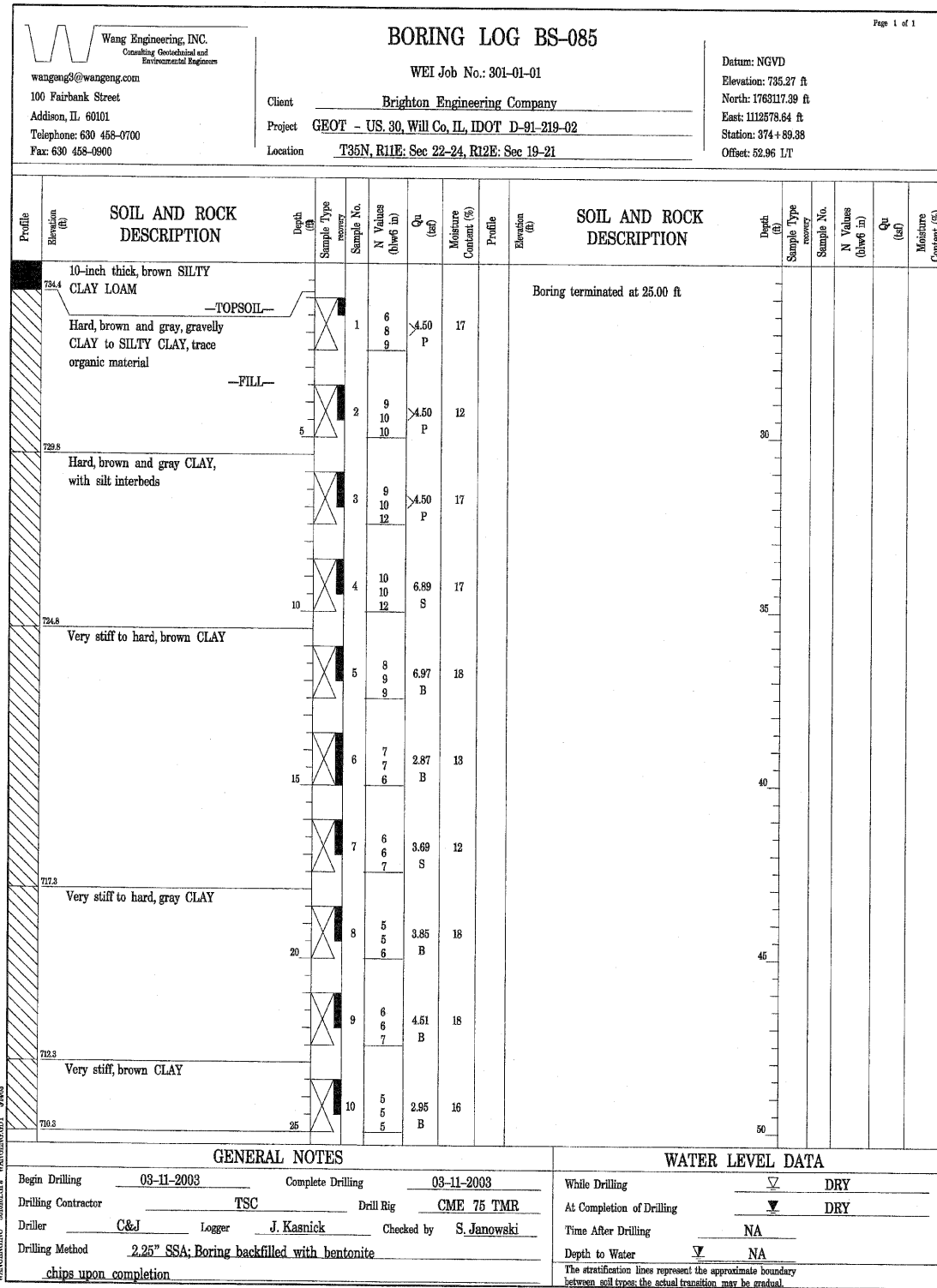
DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL 'G'  
BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479



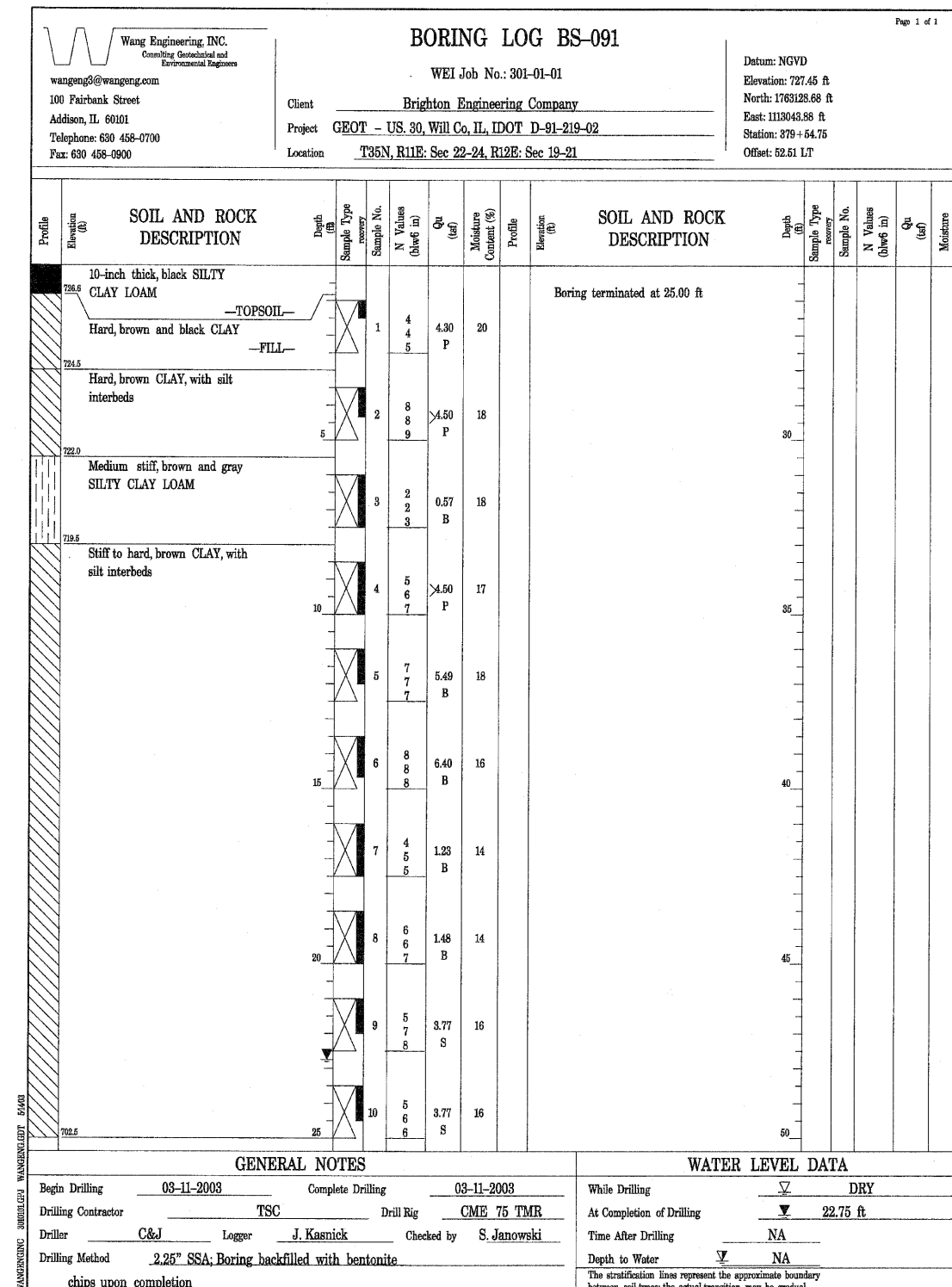
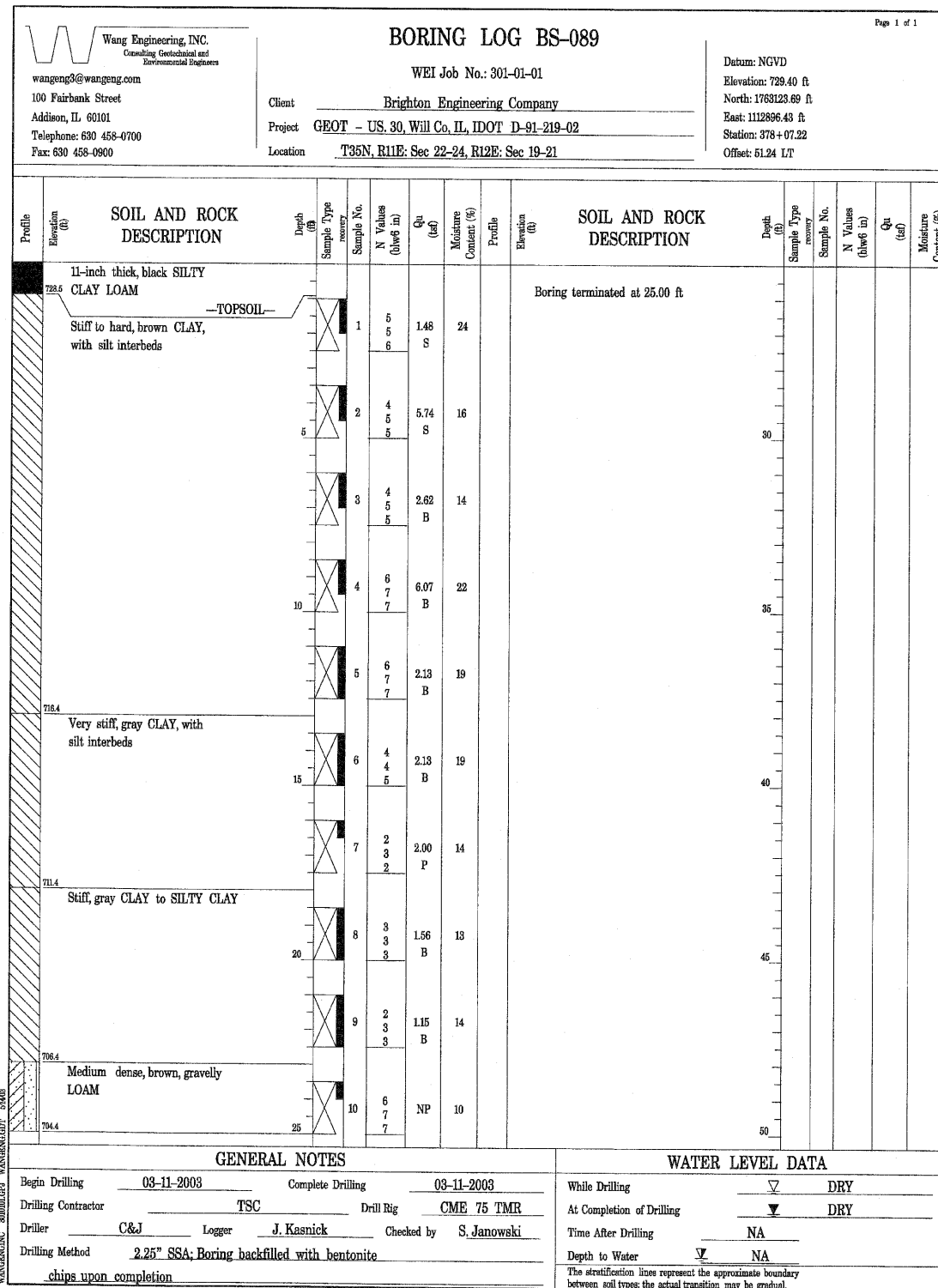
DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL 'G'  
BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY

REVISIONS	
NAME	DATE

\* SECT. 12 & 13 WRS-3  
\* CONTRACT NO. 62479

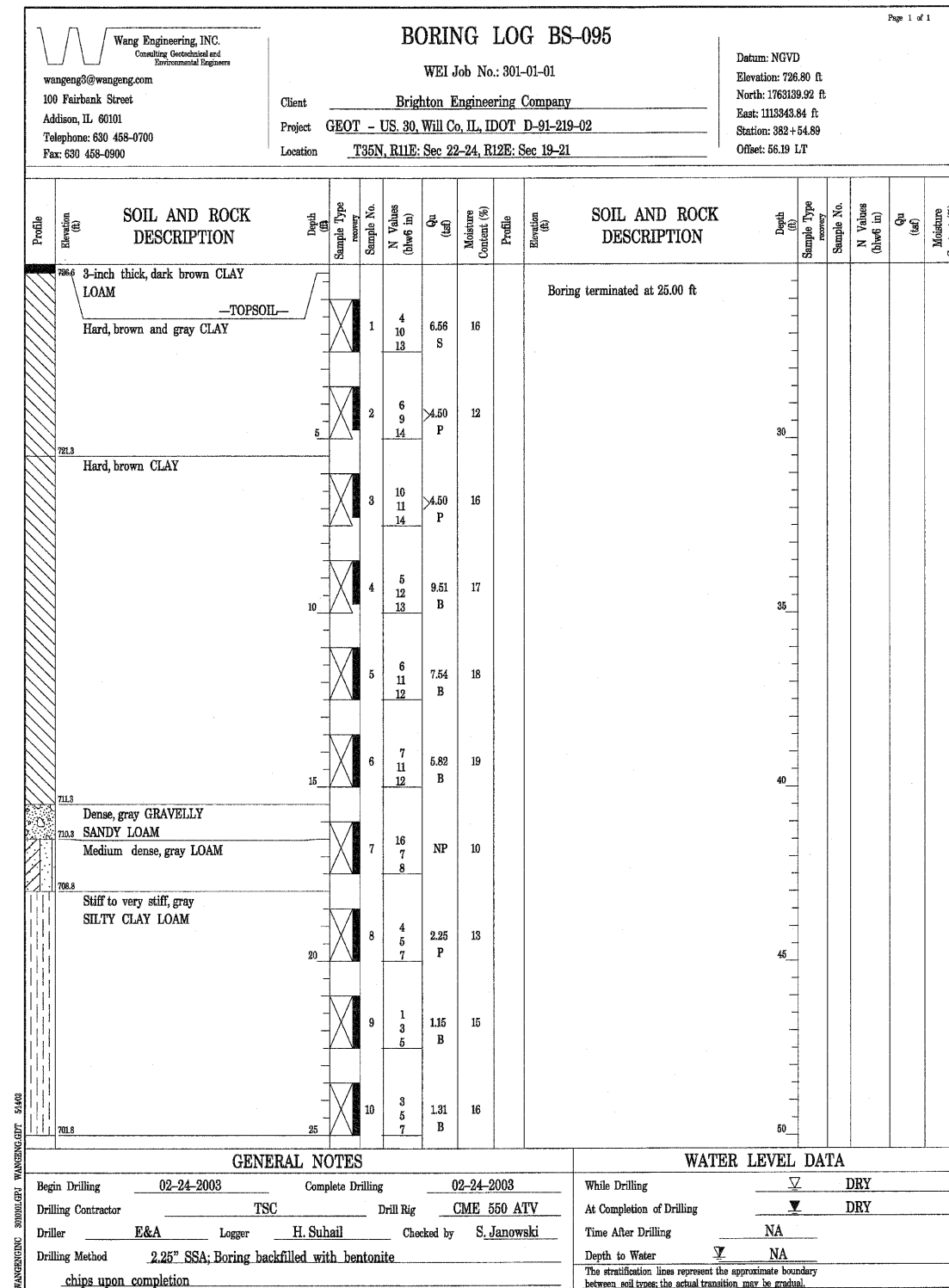
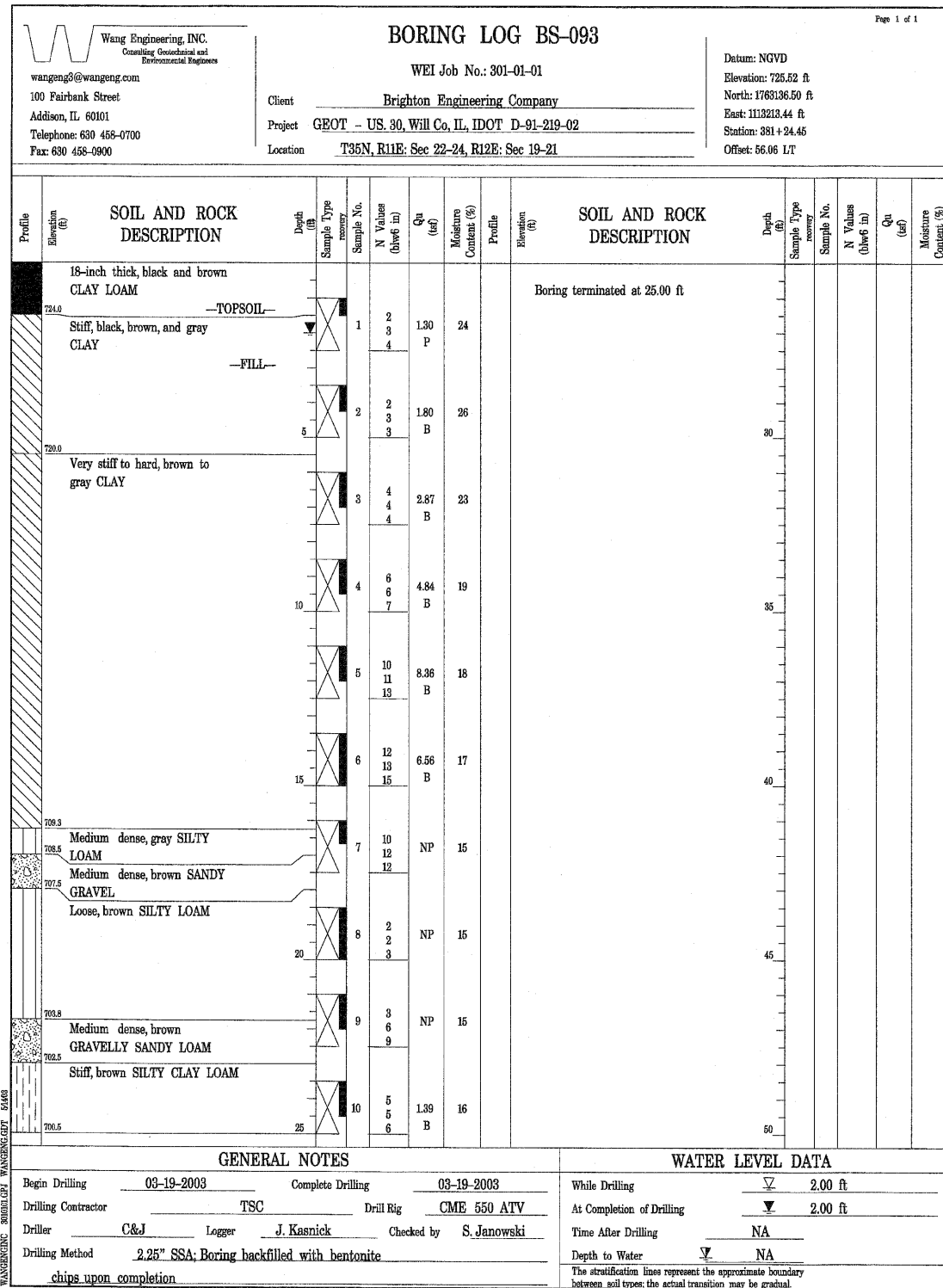


DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL 'G'  
BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY

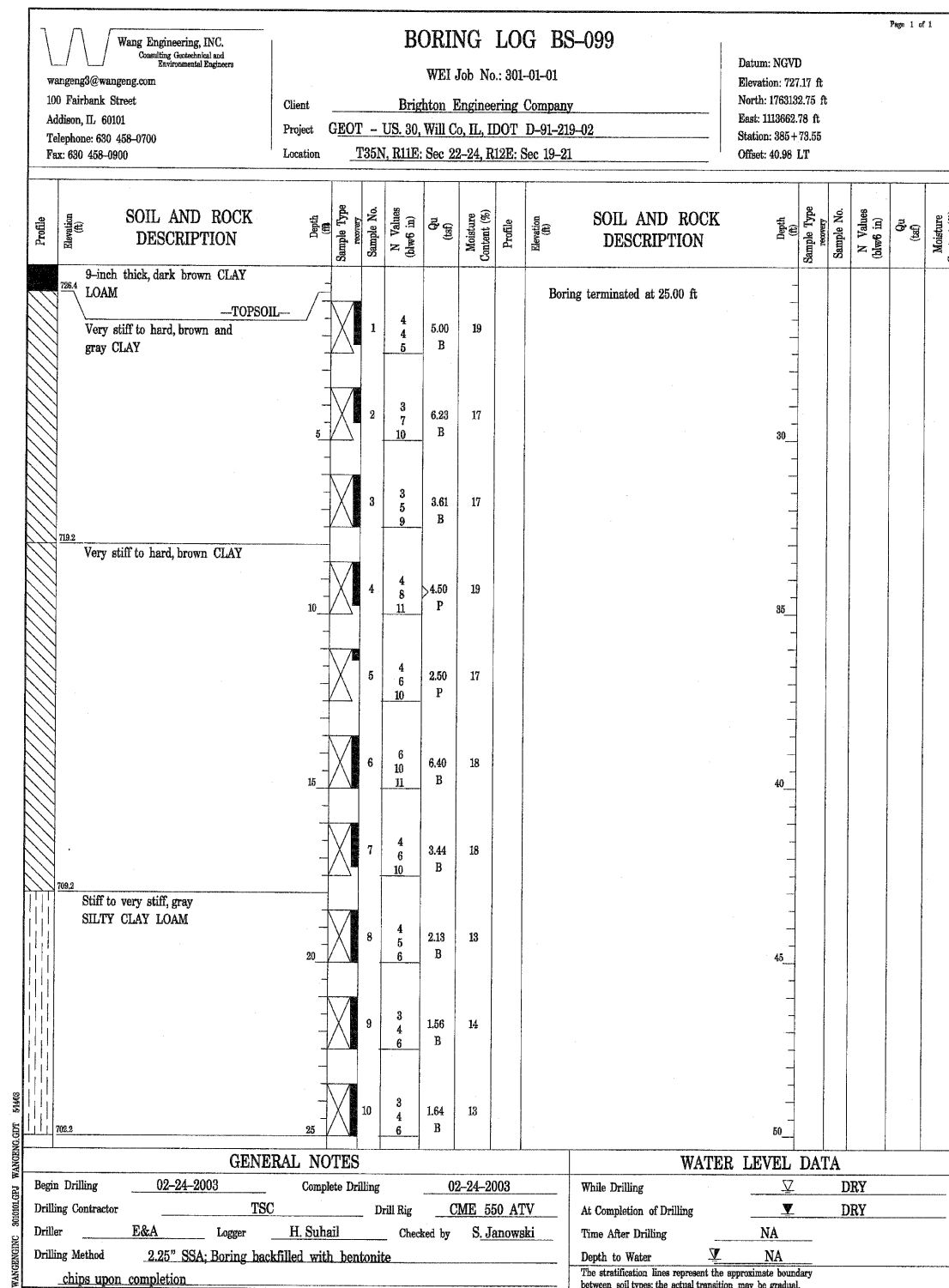
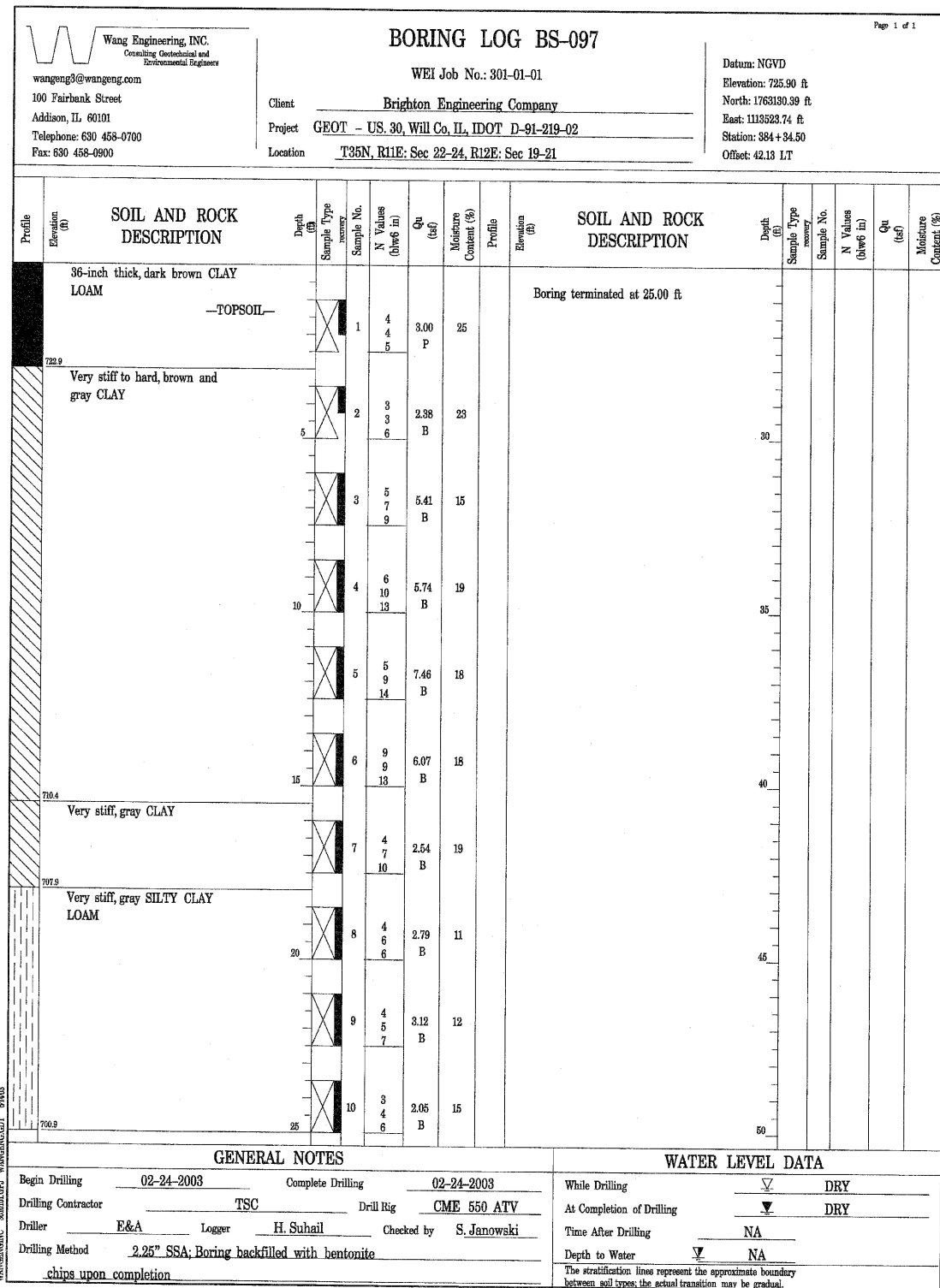


DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL 'G'  
BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY



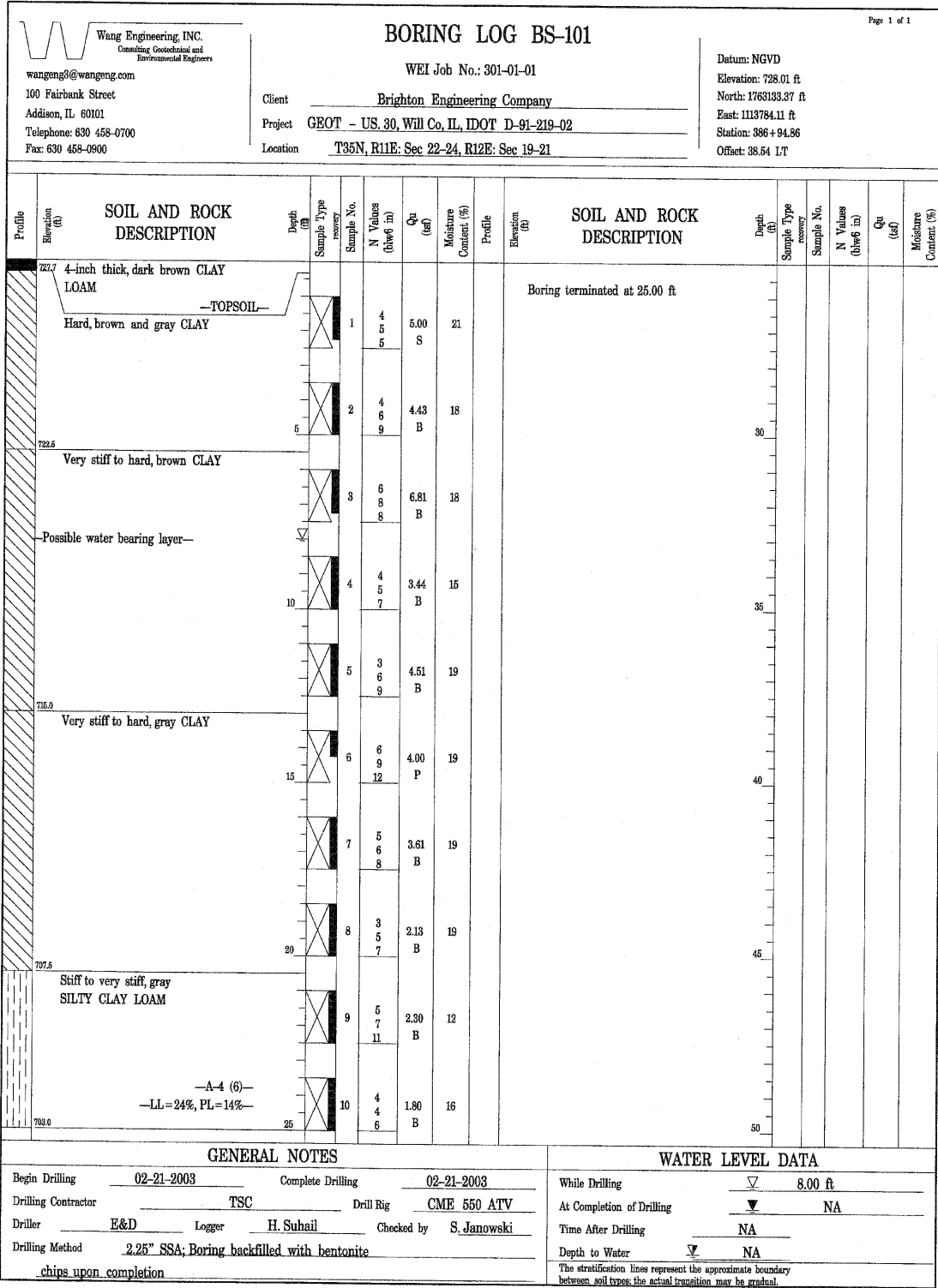
DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL 'G'  
BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY





DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

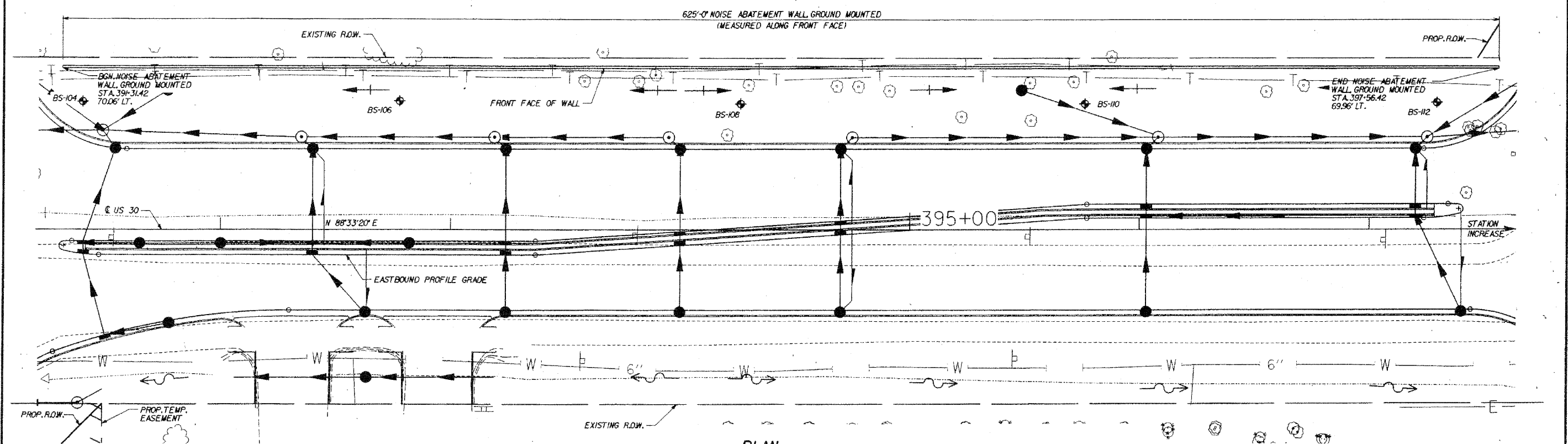
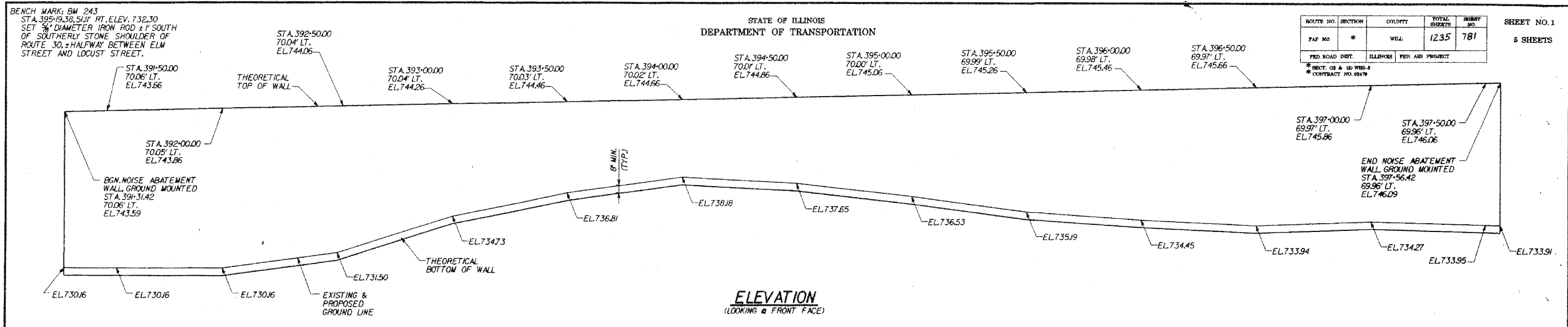
**DLZ** DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

**NOISE WALL 'G'  
BORING LOG**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 372+65.00 TO 389+70.00  
WILL COUNTY

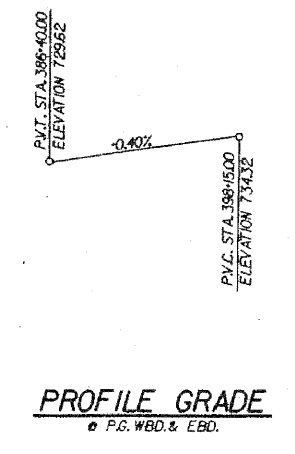
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 353	*	WILL	1235	781
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	
* DIST. 08 & 10 WRS-3 * CONTRACT NO. 82479				

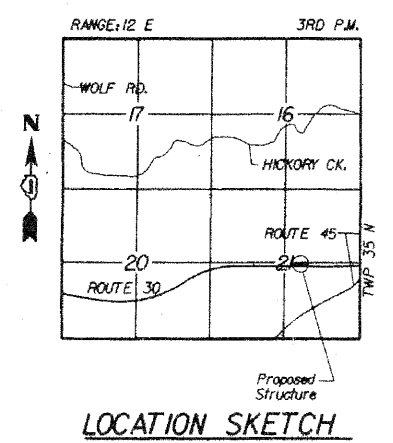
SHEET NO. 1  
5 SHEETS



PLAN



PROFILE GRADE  
P.G. WBD & EBD.

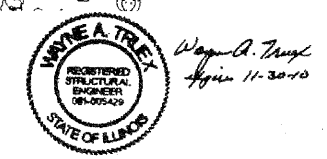


LOCATION SKETCH

DESIGN SPECIFICATIONS  
AASHTO 2002 SPECIFICATIONS

TOTAL BILL OF MATERIALS		
ITEM	UNIT	QUANTITY
NOISE ABATEMENT WALL GROUND MOUNTED	SQ. FT.	6,890

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP



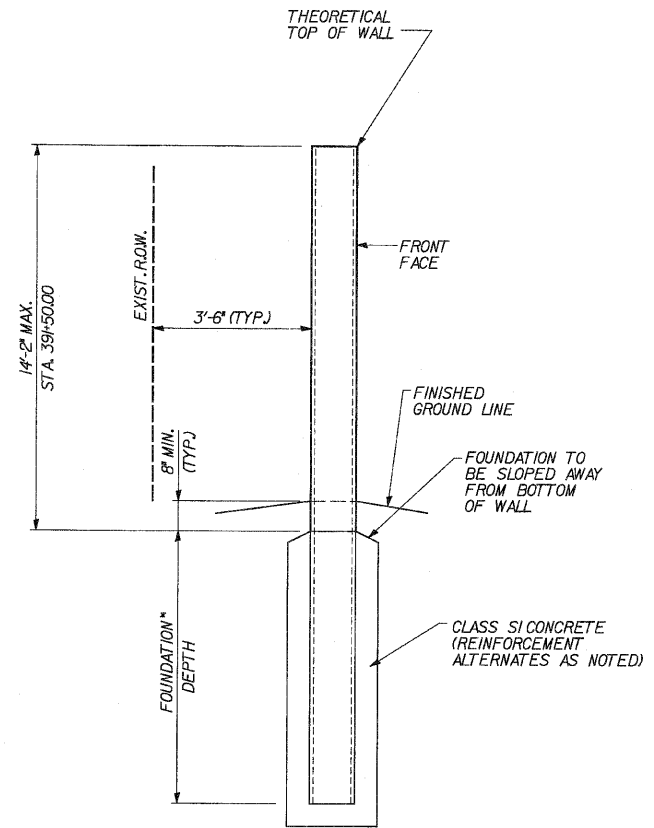
DLZ 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005



REVISIONS	
NAME	DATE

**NOISE WALL H**  
**PLAN & ELEVATION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 391+31.42 TO 397+56.42  
WILL COUNTY

\* SECT. 12 & 13) WRS-3  
\* CONTRACT NO. 62479



**NOISE ABATEMENT WALL GROUND MOUNTED TYPICAL SECTION**

\* FOUNDATION DEPTH TO BE DETERMINED BY CONTRACTOR.  
NOTE: LOW CLEARANCE EQUIPMENT SHOULD BE USED FOR THE INSTALLATION OF THE NOISE WALLS AND THE CONTRACTOR SHOULD COORDINATE THE INSTALLATION WITH THE UTILITY COMPANIES

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

REVISIONS	
NAME	DATE

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

**NOISE WALL H  
TYPICAL SECTION**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 391+31.42 TO 397+56.42  
WILL COUNTY

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-106**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 733.85 ft  
North: 1763165.36 ft  
East: 1114367.58 ft  
Station: 392 + 78.95  
Offset: 55.81 LT

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
733.2	8-inch thick, dark brown CLAY LOAM								Boring terminated at 25.00 ft						
	Hard, brown CLAY	1		5	4.50	17									
		6		7	4.50	16									
728.4	Hard, brown and gray CLAY														
		3		7	7.46	19									
725.3	Stiff, brown CLAY LOAM														
		4		3	1.00	16									
723.4	Very stiff, brown CLAY														
		5		4	3.75	15									
		6		4	3.44	16									
718.4	Dense, brown and gray SANDY LOAM														
		7		10	NP	20									
715.9	Dense, gray SILT														
		8		9	NP	21									
712.4	Very dense, brown, fine SAND														
		9		12	NP	19									
710.8	Very dense, gray SILT														
		10		13	NP	18									

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-20-2003	Complete Drilling	02-20-2003
Drilling Contractor	TSC	Drill Rig	CME 550 ATV
Driller	E&A	Logger	H. Suhail
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion
While Drilling	21.50 ft	At Completion of Drilling	NA
Time After Drilling	NA	Depth to Water	NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng3@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-108**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 734.00 ft  
North: 1763168.00 ft  
East: 1114516.00 ft  
Station:  
Offset:

Page 1 of 1

Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample Type	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
733.5	6-inch thick, dark brown CLAY LOAM								Boring terminated at 25.00 ft						
	Hard, brown CLAY	1		5	4.50	13									
		2		9	4.50	13									
728.4	Hard, brown and gray CLAY														
		3		12	13.78	15									
725.3	Stiff, brown CLAY LOAM														
		4		9	6.64	17									
723.4	Very stiff, brown CLAY														
		5		7	4.50	14									
		6		5	5.00	15									
718.4	Dense, brown and gray SANDY LOAM														
		7		5	NP	8									
715.9	Dense, gray SILT														
		8		17	NP	18									
712.4	Very dense, brown, fine SAND														
		9		11	NP	13									
710.8	Dense, brown and gray SILT														
		10		10	NP	13									

GENERAL NOTES		WATER LEVEL DATA	
Begin Drilling	02-20-2003	Complete Drilling	02-20-2003
Drilling Contractor	TSC	Drill Rig	CME 550 ATV
Driller	E&A	Logger	H. Suhail
Checked by	S. Janowski	Drilling Method	2.25" SSA; Boring backfilled with bentonite chips upon completion
While Drilling	DRY	At Completion of Drilling	DRY
Time After Drilling	NA	Depth to Water	NA

The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

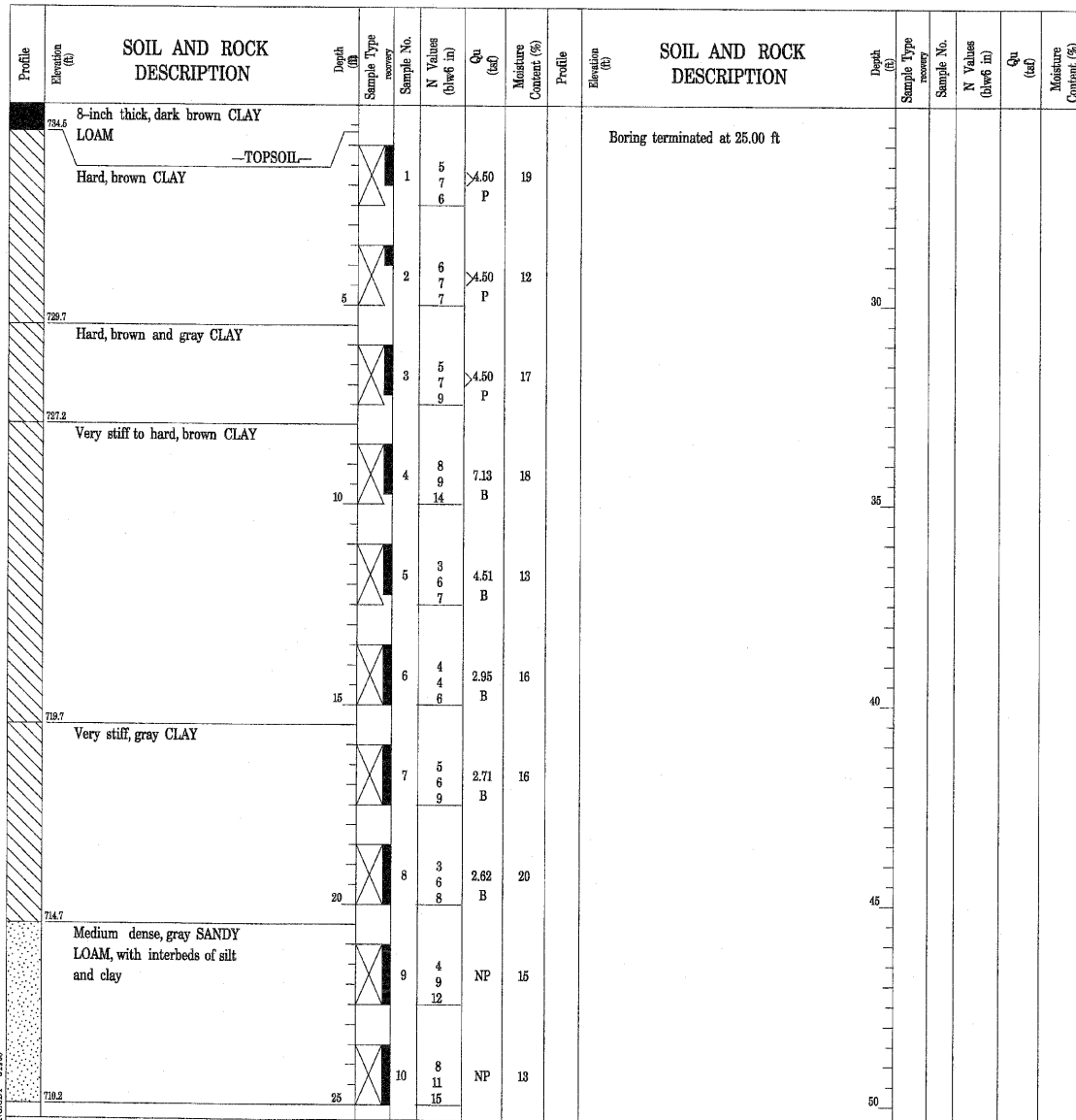
REVISIONS	
NAME	DATE

**NOISE WALL H  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 391+31.42 TO 397+56.42  
WILL COUNTY

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-110**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 735.18 ft  
North: 1763171.69 ft  
East: 1114665.79 ft  
Station: 395+77.22  
Offset: 54.63 LT

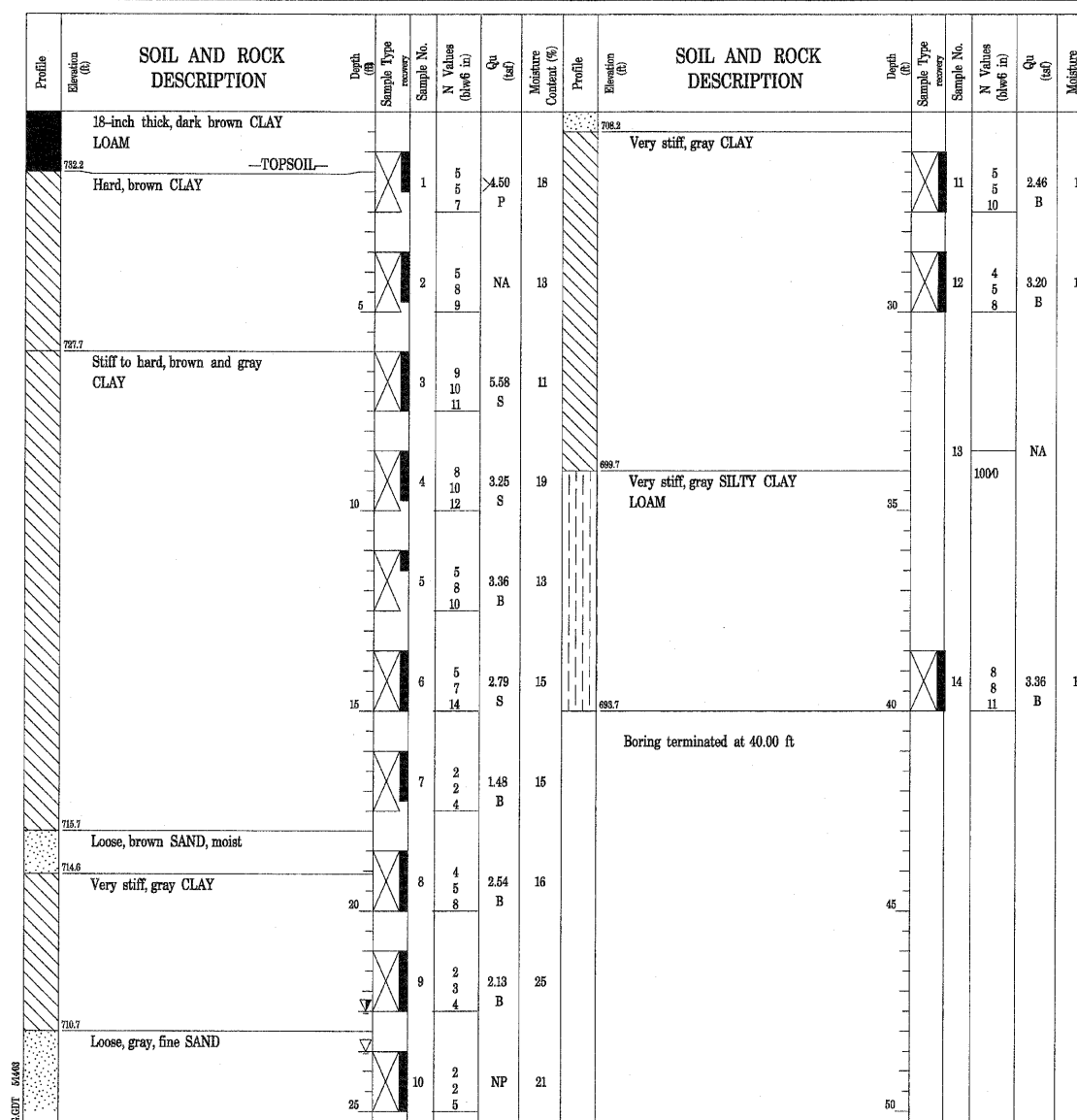


GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-19-2003	Complete Drilling	02-20-2003	While Drilling	▽	DRY	
Drilling Contractor	TSC	Drill Rig	CME 550 ATV	At Completion of Drilling	▽	DRY	
Driller	E&A	Logger	H. Suhail	Time After Drilling	NA		
Checked by	S. Janowski	Depth to Water	▽	NA			
Drilling Method	3.25" ID HSA; Boring backfilled with bentonite chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

**Wang Engineering, Inc.**  
Consulting Geotechnical and Environmental Engineers  
wangeng@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-112**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 733.71 ft  
North: 1763176.01 ft  
East: 1114818.87 ft  
Station: 397+30.37  
Offset: 55.09 LT



GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-19-2003	Complete Drilling	02-19-2003	While Drilling	▽	23.50 ft	
Drilling Contractor	TSC	Drill Rig	CME 550 ATV	At Completion of Drilling	▽	DRY	
Driller	E&A	Logger	H. Suhail	Time After Drilling	24 hours		
Checked by	S. Janowski	Depth to Water	▽	22.50 ft			
Drilling Method	3.25" ID HSA; Boring backfilled with bentonite chips upon completion			The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ**  
DLZ Illinois, Inc.  
85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005

REVISIONS	
NAME	DATE

**NOISE WALL H  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 391+31.42 TO 397+56.42  
WILL COUNTY

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-103**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 729.21 ft  
North: 1763142.28 ft  
East: 1113984.25 ft  
Station: 388+96.16  
Offset: 42.41 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	
	729.2	1-inch thick, dark brown CLAY LOAM --TOPSOIL--		1	3 3 5	2.54 B	21			Boring terminated at 25.00 ft						
		Stiff to hard, brown CLAY to SILTY CLAY		2	7 11 10	>4.50 P	18									
		-A-6 (17)- -LL=37%, PL=19%-		3	4 5 8	1.97 B	15									
				4	5 8 9	5.82 B	18									
				5	8 9 11	5.00 B	19									
	718.3	Very stiff, gray CLAY to SILTY CLAY		6	4 5 7	3.12 B	19									
				7	5 6 7	2.30 B	19									
				8	5 6 7	2.62 B	19									
				9	4 4 6	2.05 B	20									
	704.2	Hard, gray SILTY CLAY LOAM		10	5 7 8	4.76 B	18									

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-21-2003	Complete Drilling	02-21-2003	While Drilling	∇	DRY	
Drilling Contractor	TSC	Drill Rig	CME 550 ATV	At Completion of Drilling	∇	DRY	
Driller	E&D	Logger	H. Suhail	Time After Drilling	NA		
Checked by	S. Janowski	Depth to Water	∇	NA			
Drilling Method: 2.25" SSA; Boring backfilled with bentonite chips upon completion.				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

**Wang Engineering, INC.**  
Consulting Geotechnical and Environmental Engineers  
wangeng@wangeng.com  
100 Fairbank Street  
Addison, IL 60101  
Telephone: 630 458-0700  
Fax: 630 458-0900

**BORING LOG BS-104**  
WEI Job No.: 301-01-01  
Client: Brighton Engineering Company  
Project: GEOT - US. 30, Will Co, IL, IDOT D-91-219-02  
Location: T35N, R11E, Sec 22-24, R12E, Sec 19-21

Datum: NGVD  
Elevation: 729.75 ft  
North: 1763161.75 ft  
East: 1114230.06 ft  
Station: 391+41.38  
Offset: 55.67 LT

Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)	Profile	Elevation (ft)	SOIL AND ROCK DESCRIPTION	Depth (ft)	Sample No.	N Values (blw6 in)	Qu (tsf)	Moisture Content (%)
	728.8	12-inch thick, black CLAY LOAM --TOPSOIL--		1	3 5 8	>4.50 P	22			Boring terminated at 25.00 ft					
		Hard, brown CLAY		2	3 4 5	1.50 P	22								
	726.5	Stiff, brown and gray CLAY, trace organic material		3	2 2 2	1.15 B	28								
				4	3 8 13	8.04 B	18								
	721.8	Hard, brown CLAY		5	3 3 5	NP	17								
	719.8	Loose to medium dense, brown SANDY LOAM, with interbeds of silt and clay		6	5 5 6	NP	11								
	715.5	Very stiff, gray CLAY		7	5 7 9	2.87 B	14								
				8	4 5 7	2.95 B	16								
				9	5 5 14	NP	22								
	707.5	Medium dense, gray, fine SAND, wet		10	7 10 12	4.26 B	18								

GENERAL NOTES				WATER LEVEL DATA			
Begin Drilling	02-20-2003	Complete Drilling	02-20-2003	While Drilling	∇	22.25 ft	
Drilling Contractor	TSC	Drill Rig	CME 550 ATV	At Completion of Drilling	∇	DRY	
Driller	E&A	Logger	H. Suhail	Time After Drilling	NA		
Checked by	S. Janowski	Depth to Water	∇	NA			
Drilling Method: 2.25" SSA; Boring backfilled with bentonite chips upon completion.				The stratification lines represent the approximate boundary between soil types; the actual transition may be gradual.			

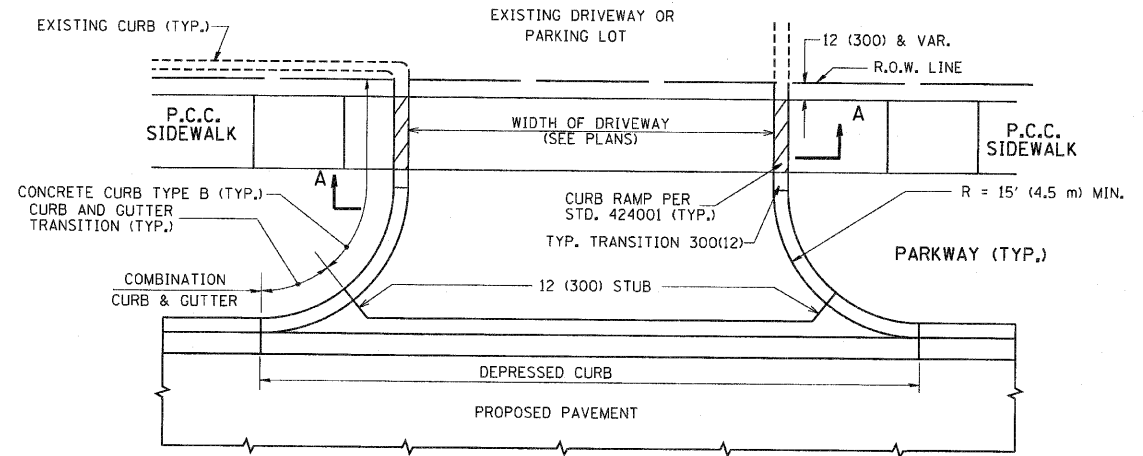
DESIGNED	ASP
CHECKED	WSP
DRAWN	BGC
CHECKED	WSP

**DLZ** 85 W. Algonquin Rd. Ste. 220  
Arlington Heights IL 60005  
DLZ Illinois, Inc.

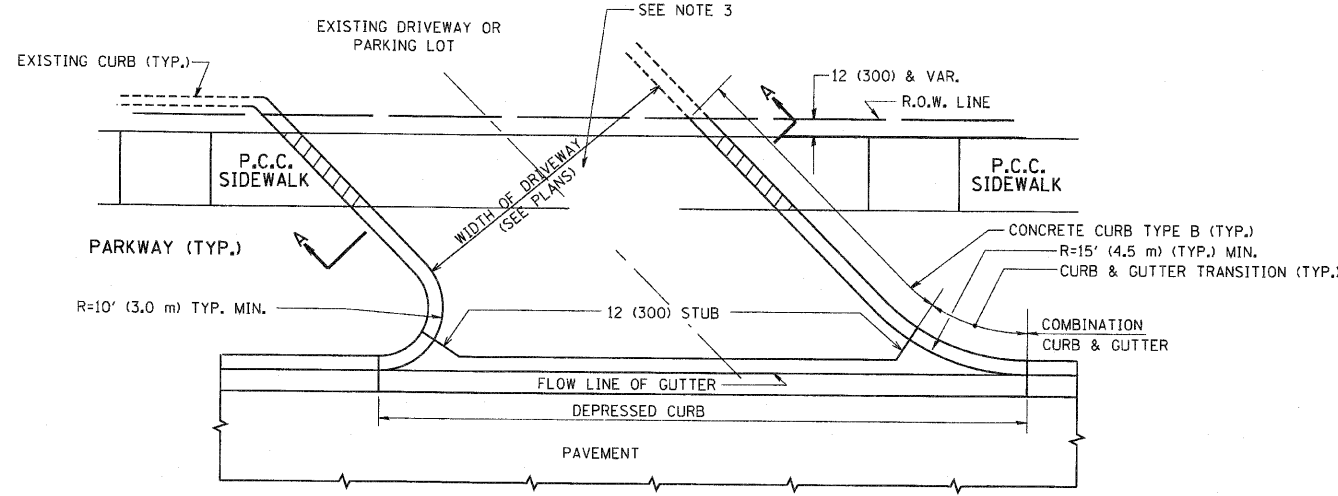
REVISIONS	
NAME	DATE

**NOISE WALL H  
BORINGS**  
U.S. ROUTE 30 (LINCOLN HIGHWAY)  
F.A.P. 353 (U.S. 30)  
SECTION (12 & 13) WRS-3  
STATION 391+31.42 TO 397+56.42  
WILL COUNTY

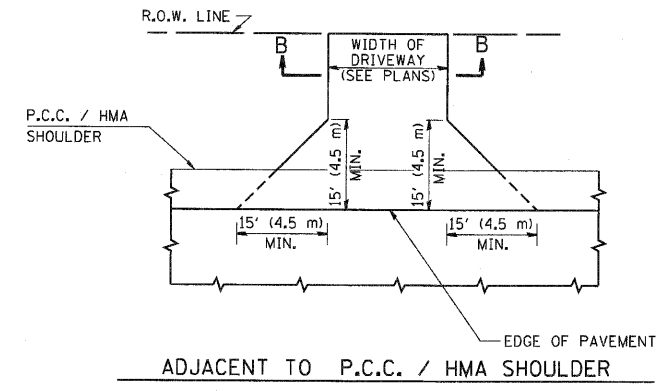
F.A.P.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	786
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



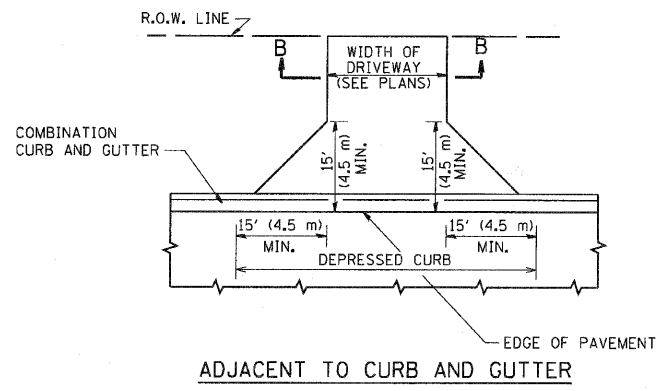
WITH CONCRETE CURB, TYPE B



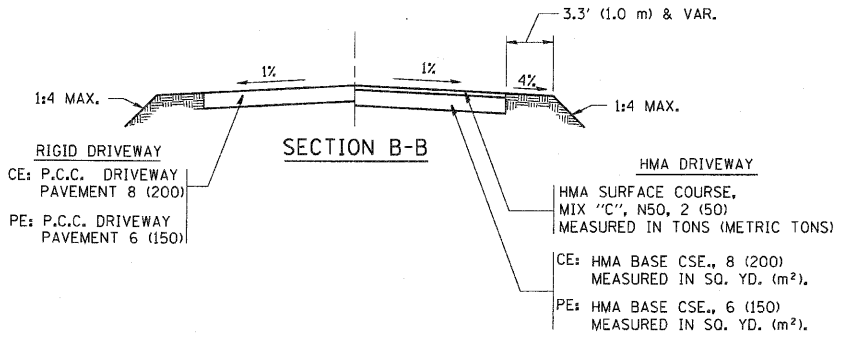
WITH CONCRETE CURB, TYPE B



ADJACENT TO P.C.C. / HMA SHOULDER

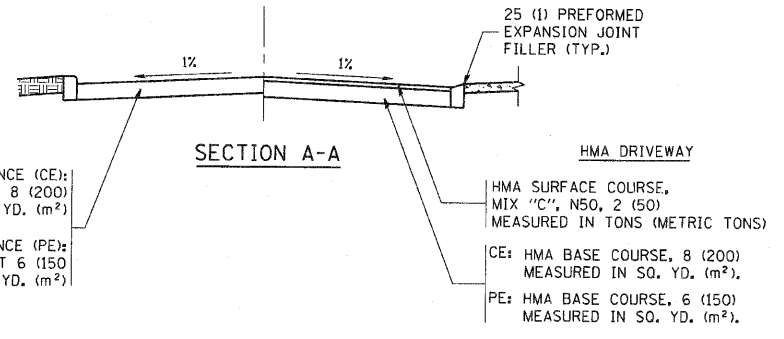


ADJACENT TO CURB AND GUTTER



SECTION B-B

RURAL FIELD ENTRANCE (FE)  
 HMA SURFACE COURSE,  
 MIX "C", N50, 2 (50)  
 MEASURED IN TONS (METRIC TONS)  
 CE: HMA BASE COURSE, 8 (200)  
 MEASURED IN SQ. YD. (m<sup>2</sup>).  
 PE: HMA BASE COURSE, 6 (150)  
 MEASURED IN SQ. YD. (m<sup>2</sup>).  
 AGGREGATE BASE CSE., TYPE B, 8 (200)  
 MEASURED IN SQ. YD. (m<sup>2</sup>).



SECTION A-A

RIGID DRIVEWAY  
 COMMERCIAL ENTRANCE (CE):  
 P.C.C. DRIVEWAY PAVEMENT 8 (200)  
 MEASURED IN SQ. YD. (m<sup>2</sup>)  
 NON-COMMERCIAL ENTRANCE (PE):  
 P.C.C. DRIVEWAY PAVEMENT 6 (150)  
 MEASURED IN SQ. YD. (m<sup>2</sup>)

HMA DRIVEWAY  
 HMA SURFACE COURSE,  
 MIX "C", N50, 2 (50)  
 MEASURED IN TONS (METRIC TONS)  
 CE: HMA BASE COURSE, 8 (200)  
 MEASURED IN SQ. YD. (m<sup>2</sup>).  
 PE: HMA BASE COURSE, 6 (150)  
 MEASURED IN SQ. YD. (m<sup>2</sup>).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

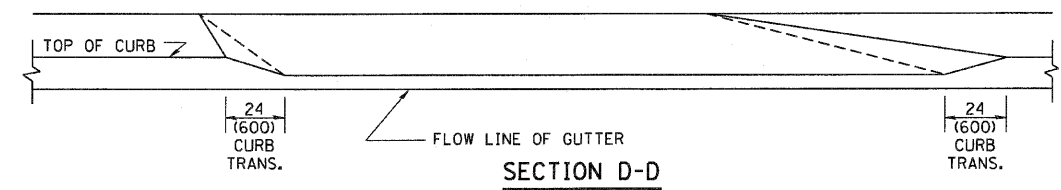
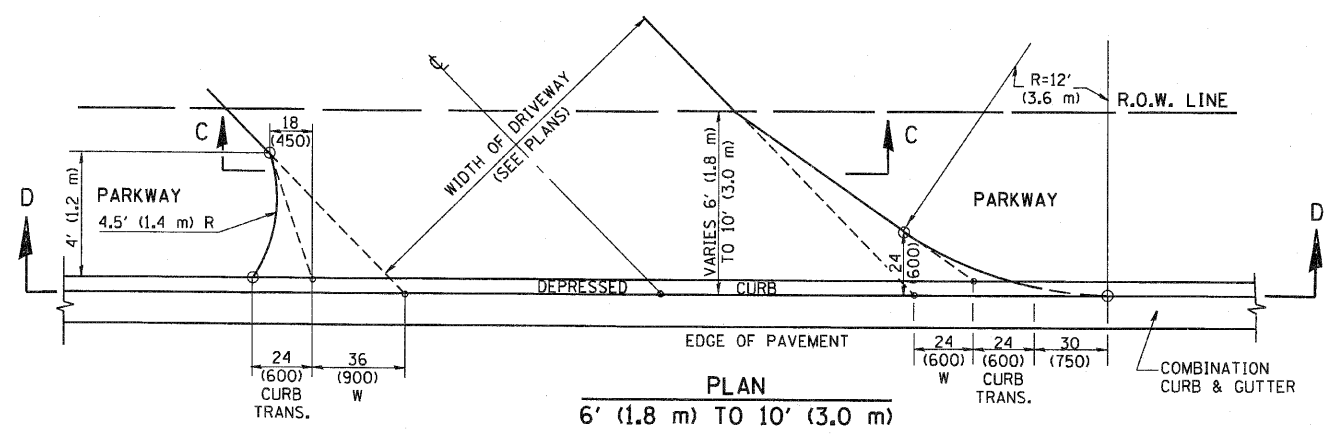
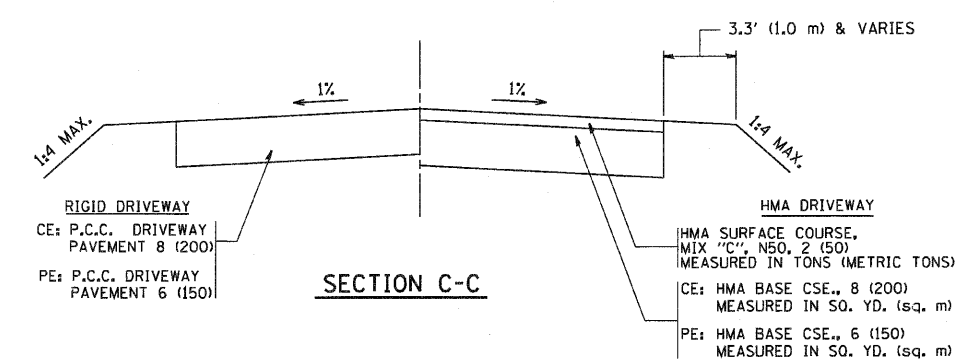
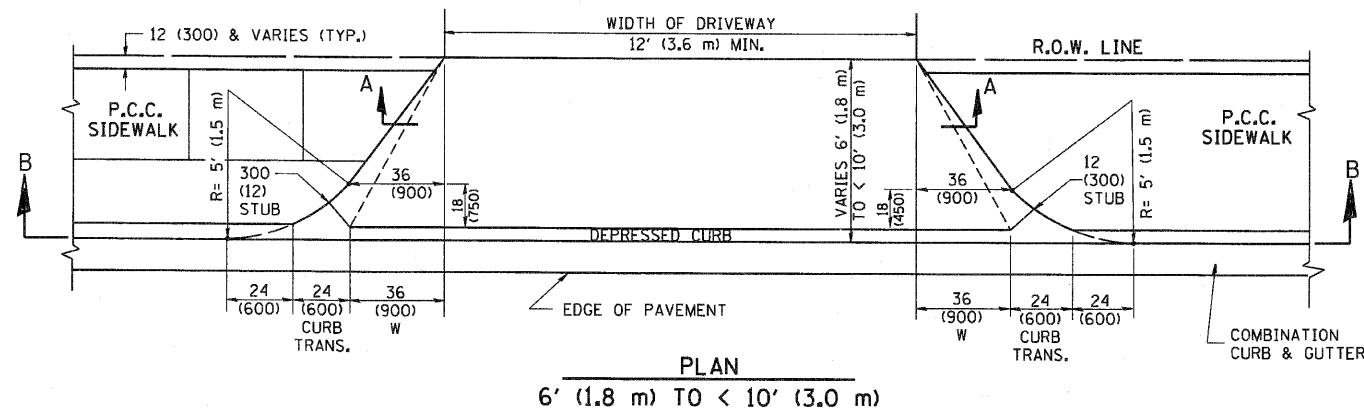
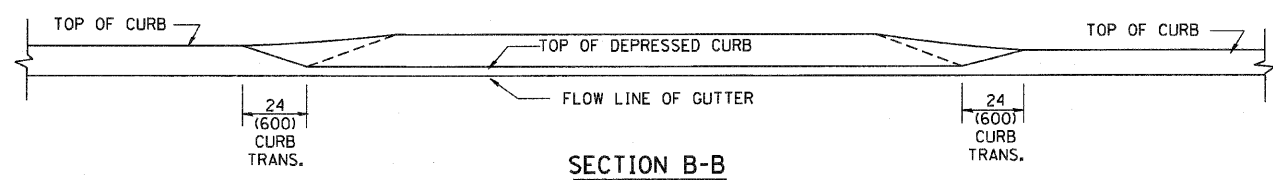
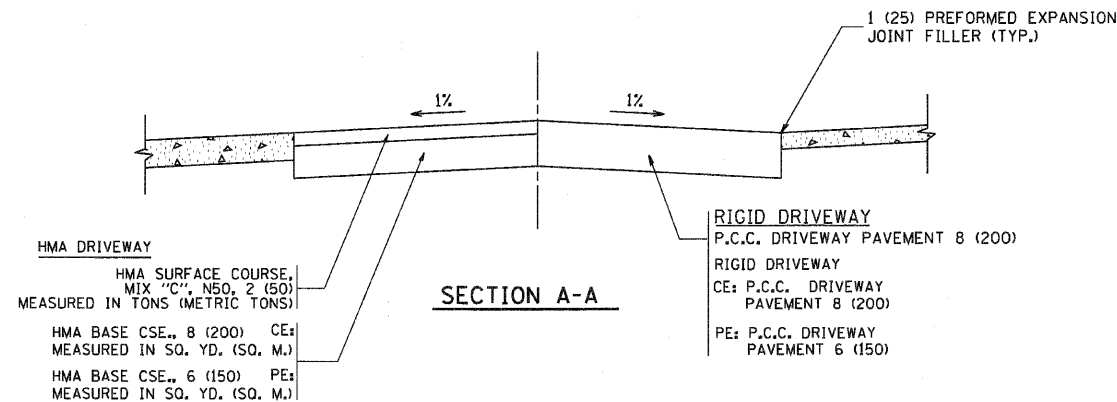
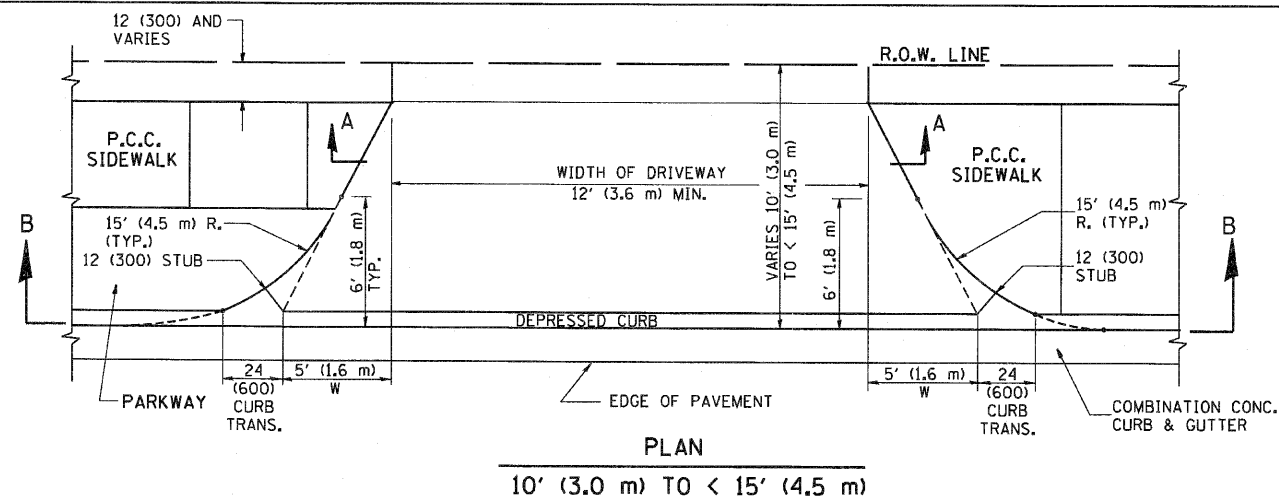
REVISIONS	
NAME	DATE
R. SHAH	11-04-95
J. POLLASTRINI	08-12-96
J. POLLASTRINI	12-14-96
A. ABBAS	03-21-97
T. HOLTZ	04-08-97
M. GOMEZ	04-06-01
P. LoFLEUR	04-15-03
R. BORO	01-01-07
R. BORO	06-11-08

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DRIVEWAY DETAILS**  
 DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

SCALE: VERT. NONE  
 HORIZ.  
 DRAWN BY  
 CHECKED BY

PLOT DATE = 6/12/2008  
 FILE NAME = c:\projects\dist\2436\bd01.dgn  
 PLOT SCALE = 48,9999 / 1  
 USER NAME = baerdl

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	787
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



**GENERAL NOTES**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.8 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

REVISIONS	
NAME	DATE
R. SHAH	11/06/95
J. POLLASTRINI	08/12/96
J. POLLASTRINI	12/14/96
A. ABBAS	03/21/97
T. HOLTZ	04/08/97
M. GOMEZ	04/06/01
P. LOFLEUR	04/15/03
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

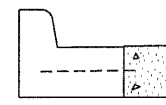
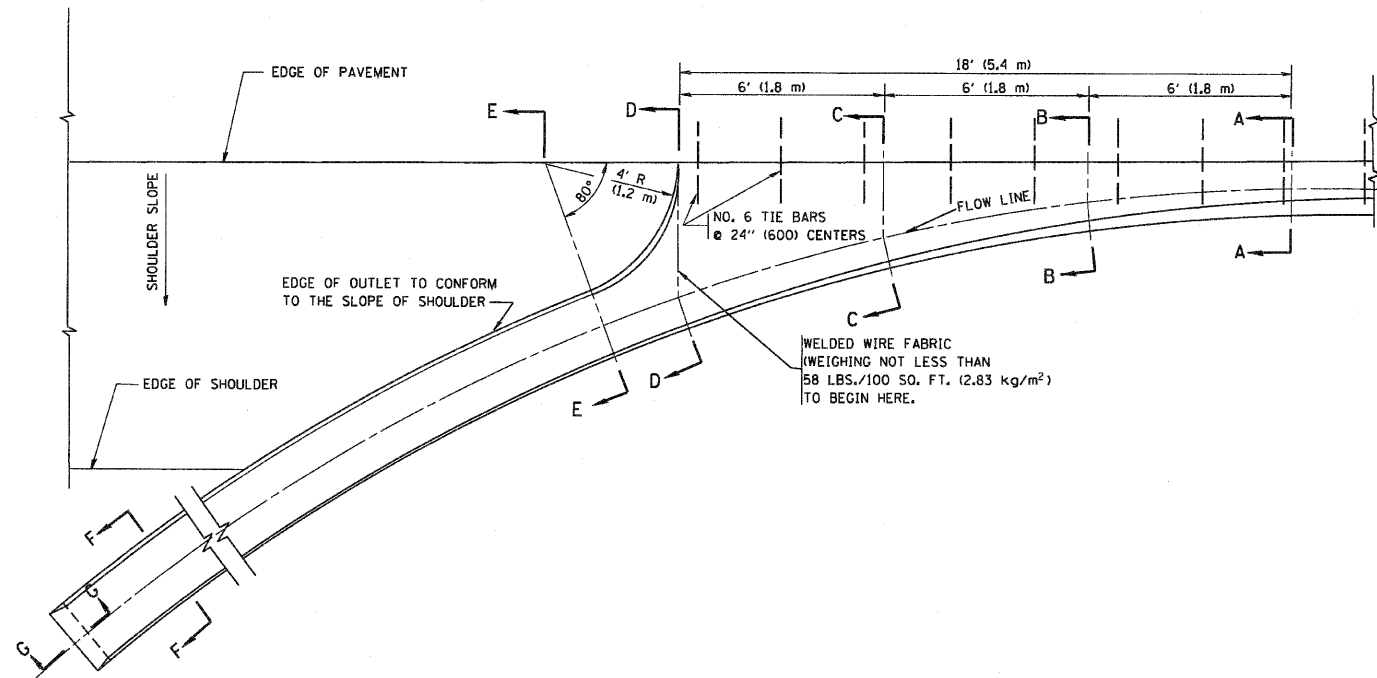
**DRIVEWAY DETAILS**  
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)

SCALE: VERT. NONE  
HORIZ.

DRAWN BY  
CHECKED BY

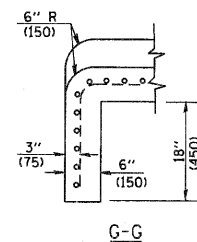
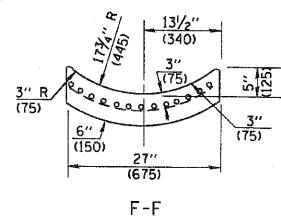
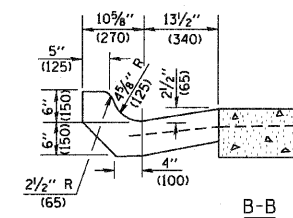
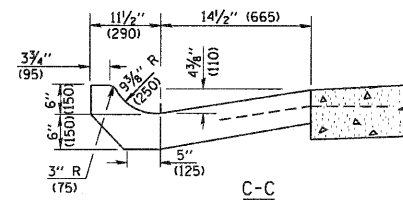
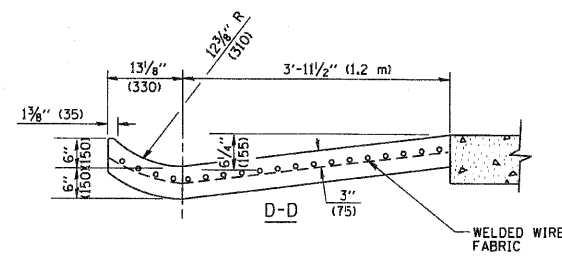
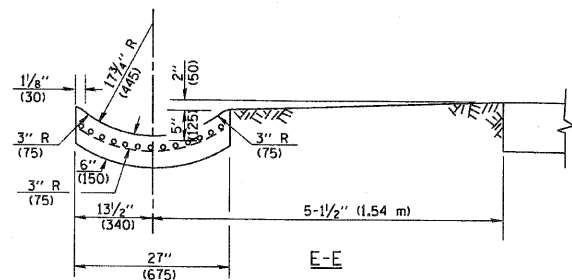


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	788
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



A-A \*

\* DIMENSIONS OF THE CURB & GUTTER AT SECTION A-A ARE SHOWN ON STATE STANDARD 606001. FOR DETAILS OF OUTLET FOR CONCRETE CURB & GUTTER, TYPE B-6.24 (B-15.60) SEE STATE STANDARD 606006.



GENERAL NOTES

GUTTER OUTLET SHALL BE TIED TO THE PAVEMENT IN ACCORDANCE WITH DETAILS FOR LONGITUDINAL CONSTRUCTION JOINT SHOWN ON STANDARD 420001.

TIE BARS SHALL BE NO. 20 (NO.6) AT 24" (600) CENTERS UNLESS OTHERWISE SHOWN.

IF THE AVERAGE GRADE OF PAVEMENT FOR THE DISTANCE FROM SECTION A-A TO D-D EXCEEDS 2%, THIS DISTANCE SHALL BE INCREASED 6' (1.8 m) FOR EACH 1% INCREASE IN GRADE.

QUANTITIES

FOR SECTION A-A TO E-E AND CURTAIN WALL =  
 1.25 CU. YDS. (0.96 m<sup>3</sup>) CLASS SI CONCRETE (OUTLET) FOR 9" (225) PAV'T.  
 1.27 CU. YDS. (0.96 m<sup>3</sup>) CLASS SI CONCRETE (OUTLET) FOR 10" (250) PAV'T.  
 FOR SECTION F-F =  
 0.045 CU. YDS. (0.03 m<sup>3</sup>) CLASS SI CONCRETE PER FT. (M).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
M. DE YONG	8/4/86
R. SHAH	09/09/94
R. SHAH	10/25/94
E. GOMEZ	12/21/00

ILLINOIS DEPARTMENT OF TRANSPORTATION

OUTLET FOR CONCRETE CURB AND GUTTER

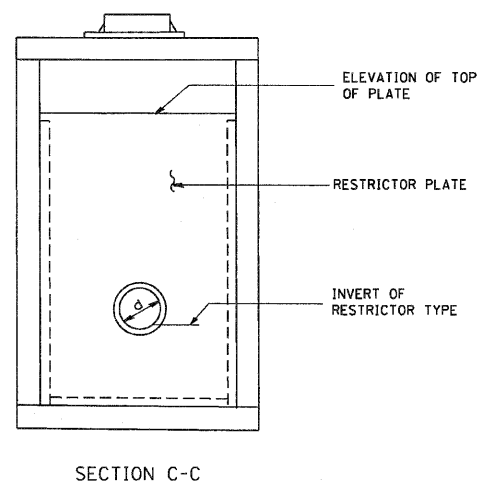
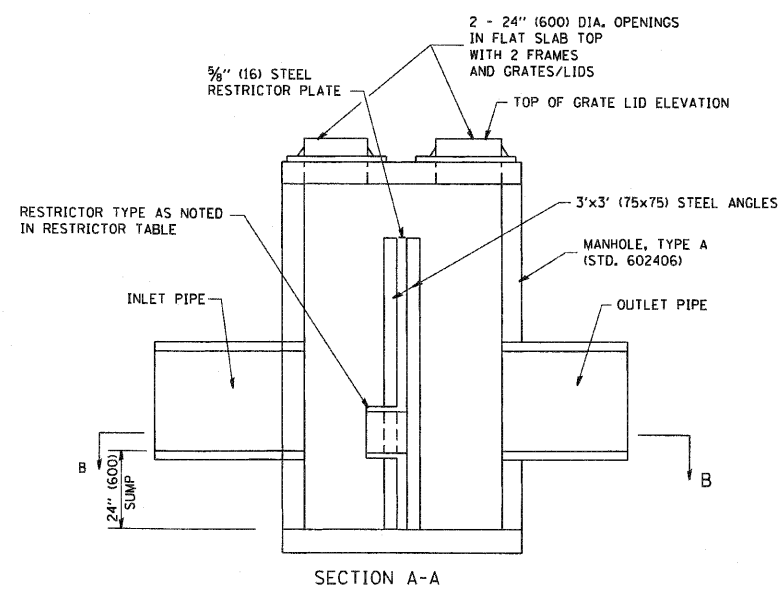
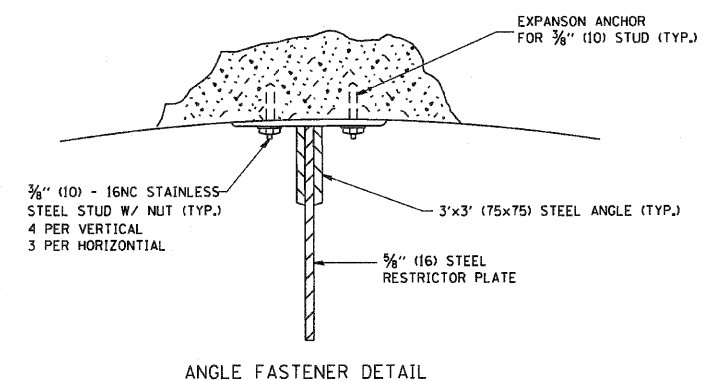
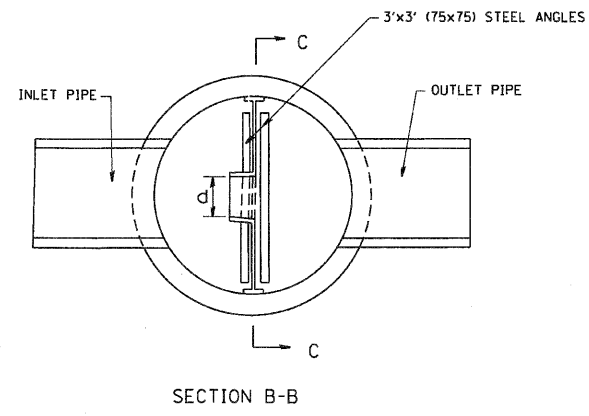
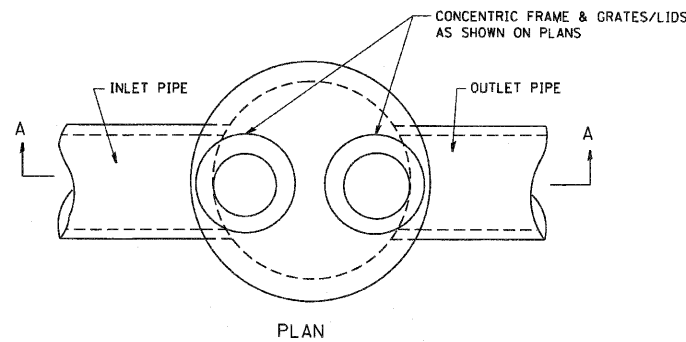
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 HORIZ.

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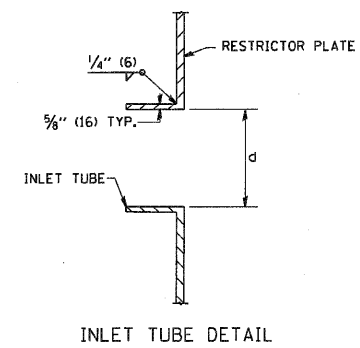
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BD600-01 (BD-03)

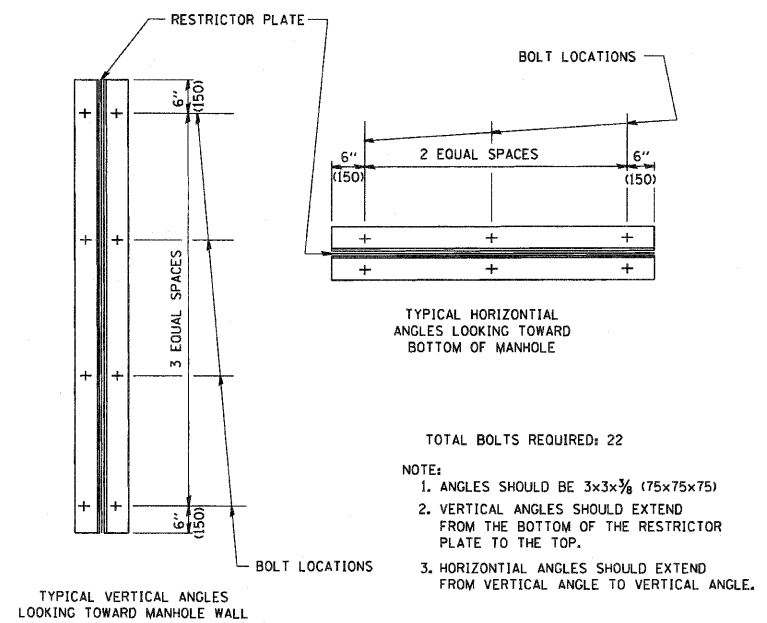




- NOTES:
1. ALL STEEL ANGLES AND PLATES TO BE GALVANIZED AFTER FABRICATION.
  2. ALL RESTRICTOR PLATES, ANGLES AND HARDWARE TO BE INCLUDED IN THE COST OF THE MANHOLE.
  3. BASIS OF PAYMENT: "MANHOLES, TYPE A, 6 FT. (1.8 m)-DIAMETER, TYPE 1 FRAME, CLOSED LID, RESTRICTOR PLATE" EACH



STATION	MANHOLE DIAMETER	FRAME AND GRATE	RESTRICTOR TYPE	INSIDE RESTRICTOR TYPE DIAMETER in. (mm) (d)	INVERT OF RESTRICTOR TYPE	ELEVATION OF TOP OF PLATE OVERFLOW
156+90.0	6	2 x TYPE 1 CLOSE LID	3	7.19"	685.24	688.56
158+45.0	6	2 x TYPE 1 CLOSE LID	3	7.39"	685.08	688.10
211+30.18	6	2 x TYPE 1 CLOSE LID	3	14.00"	717.05	719.18
234+90.0	6	2 x TYPE 1 CLOSE LID	3	7.5"	723.14	727.84
235+10.0	6	2 x TYPE 1 CLOSE LID	3	5.16"	723.20	727.84
239+99.0	6	2 x TYPE 1 OPEN LID	3	5.12"	711.18	725.24
250+65.0	6	2 x TYPE 1 OPEN LID	3	12.75"	704.79	708.63
270+40.0	6	2 x TYPE 1 CLOSE LID	3	9.70"	692.93	696.27
272+00.0	6	2 x TYPE 1 CLOSE LID	3	12.28"	693.84	696.57



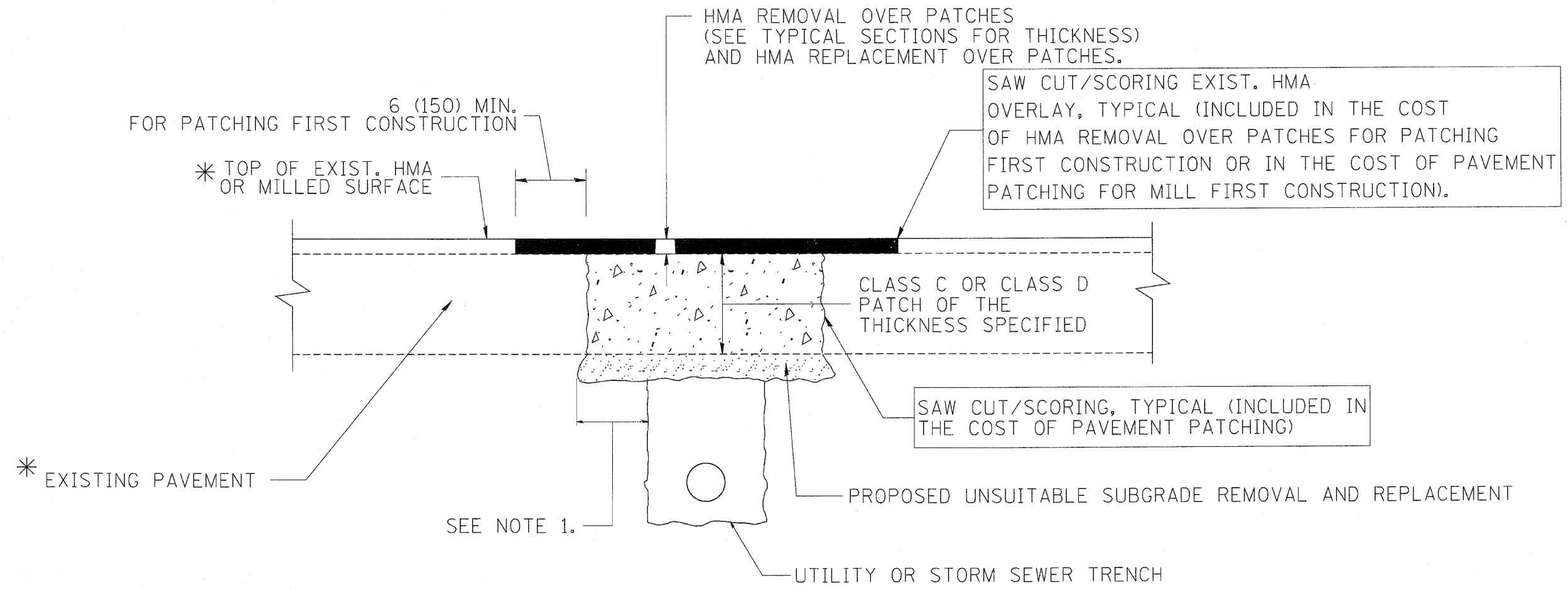
- TOTAL BOLTS REQUIRED: 22
- NOTE:
1. ANGLES SHOULD BE 3x3x3/8 (75x75x75)
  2. VERTICAL ANGLES SHOULD EXTEND FROM THE BOTTOM OF THE RESTRICTOR PLATE TO THE TOP.
  3. HORIZONTAL ANGLES SHOULD EXTEND FROM VERTICAL ANGLE TO VERTICAL ANGLE.

RESTRICTOR TYPE					
1	2	3	4	5	6
RE-ENTRANT TUBE	SHARP EDGED	SQUARE EDGED	RE-ENTRANT TUBE	SQUARE EDGED	ROUNDED
LENGTH: 1/2 TO 1 DIA.		STREAM CLEARS SIDES	LENGTH: 2-1/2 DIA.	LENGTH: 2-1/2 DIA.	
C=.52	C=.61	C=.61	C=.73	C=.82	C=.98

VALUES OF "C" FOR CIRCULAR AND SQUARE ORIFICES

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	791
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	



\* SEE TYPICAL SECTIONS FOR THICKNESS AND MATERIALS

NOTES:

1. THE WIDTH OF THE FULL DEPTH PATCH OVER A TRENCH SHALL BE 12 (300) WIDER ON EACH SIDE OF THE TRENCH.
2. FOR METHOD OF MEASUREMENT AND BASIS OF PAYMENT, SEE RECURRING SPECIAL PROVISION "PATCHING WITH HOT-MIX ASPHALT OVERLAY REMOVAL".

SEQUENCE OF CONSTRUCTION (PATCHING FIRST)

1. REMOVE THE EXISTING HMA MATERIAL OVER THE AREA TO BE PATCHED.
2. REMOVE AND REPLACE WITH CLASS C OR D PATCH.
3. REPLACE HMA MATERIAL OVER THE AREA TO BE PATCHED.

SEQUENCE OF CONSTRUCTION (MILLING FIRST)

1. MILL HMA FIRST IF THERE IS AT LEAST 4 1/2 INCHES OR MORE OF HMA MATERIAL ON TOP OF THE EXISTING PAVEMENT OR IF THE PAVEMENT IS FULL DEPTH HMA. A MINIMUM OF 2 INCHES OF HMA MATERIAL SHALL BE IN PLACE AFTER MILLING.
2. REMOVE AND REPLACE WITH FULL DEPTH CLASS D PATCHES TO TOP OF MILLED SURFACE.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
R. SHAH	01/14/95
R. SHAH	03/23/95
R. SHAH	04/24/95
A. HOUSEH	03/15/96
A. ABBAS	03/21/97
A. ABBAS	01/20/98
ART ABBAS	04/27/98
R. BORO	01/01/07
R. BORO	09/04/07
K. ENG	10/27/08

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT PATCHING FOR HMA SURFACED PAVEMENT

SCALE: VERT. NONE  
HORIZ.

DRAWN BY  
CHECKED BY

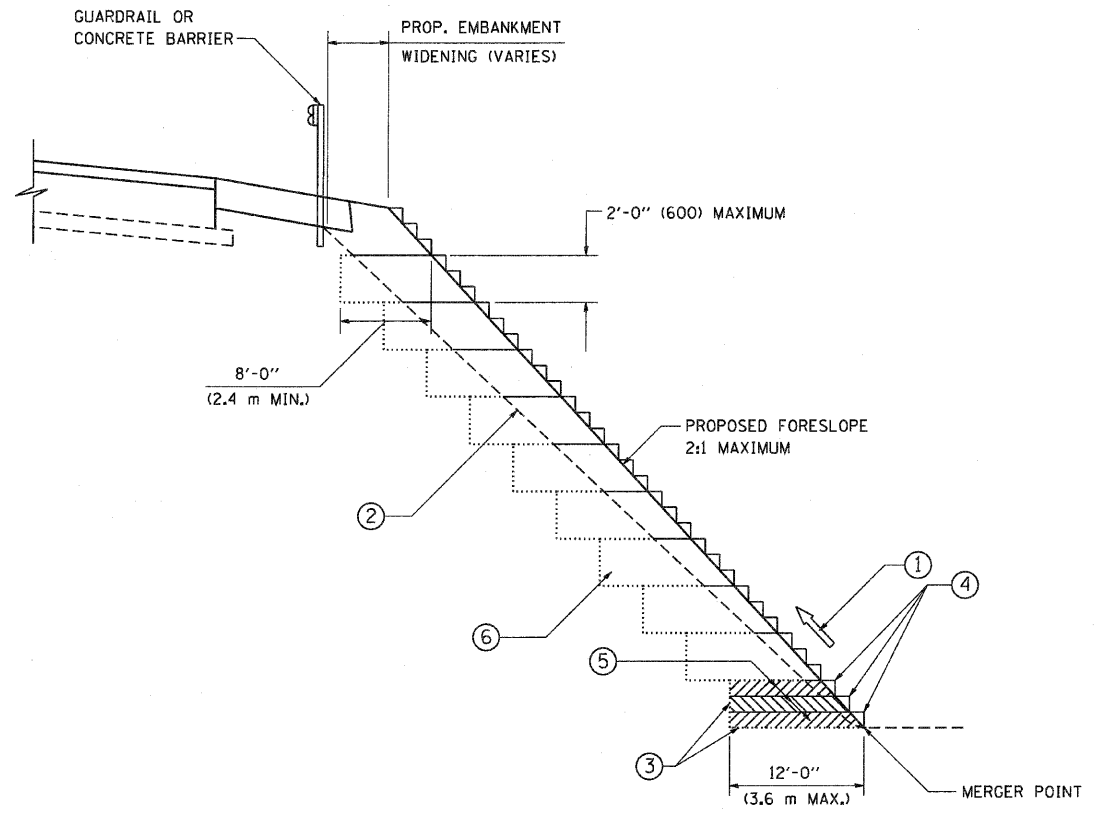
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USER NAME = bauerdl







F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	795
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



TYPICAL BENCHING DETAIL  
FOR EMBANKMENT

NOTES:

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
	06/16/04

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BENCHING DETAIL  
FOR EMBANKMENT  
WIDENING**

SCALE: VERT. NONE  
HORIZ.

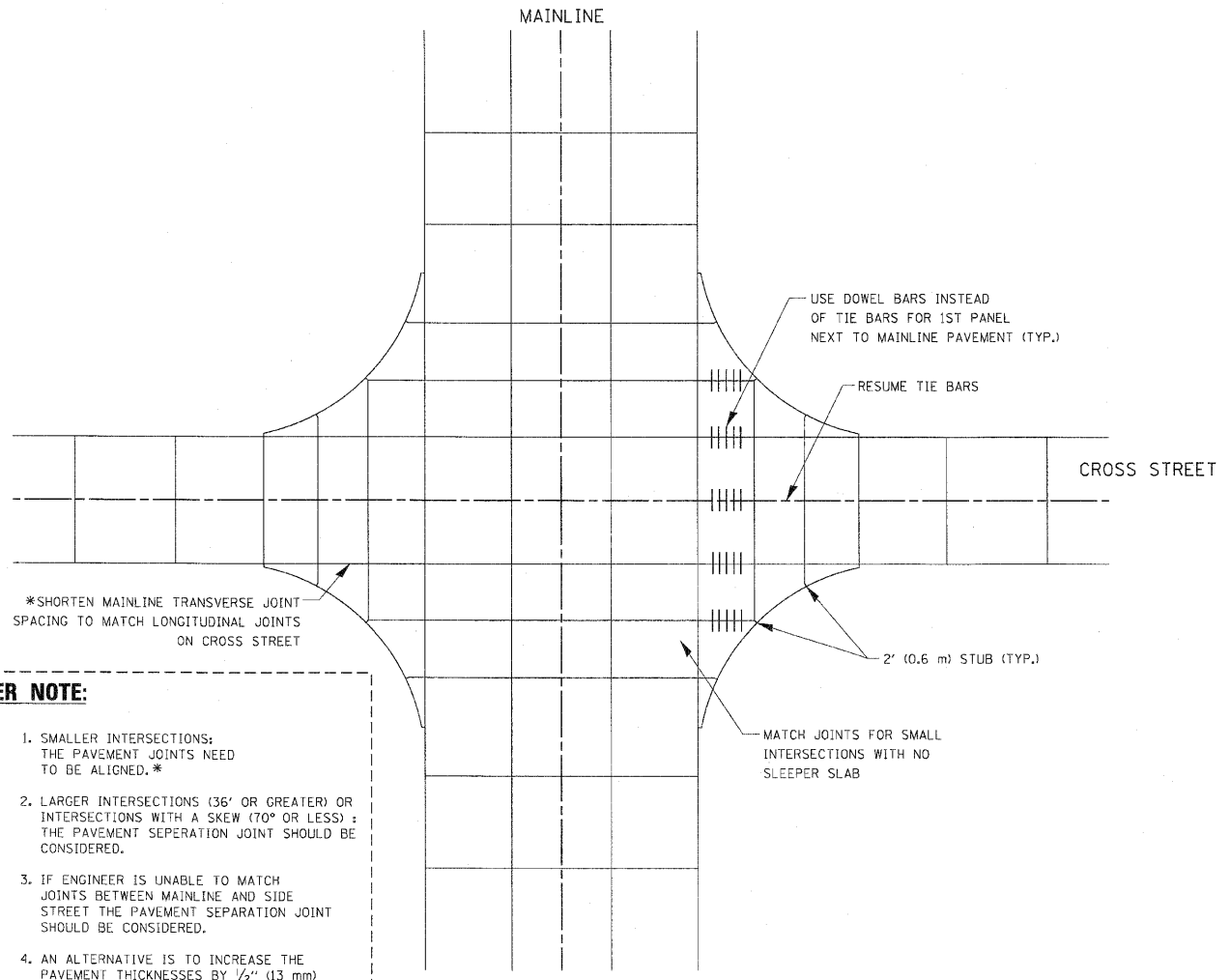
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CHECKED BY: S.E.B.  
BD-51

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USER NAME = bbeard



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	796
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

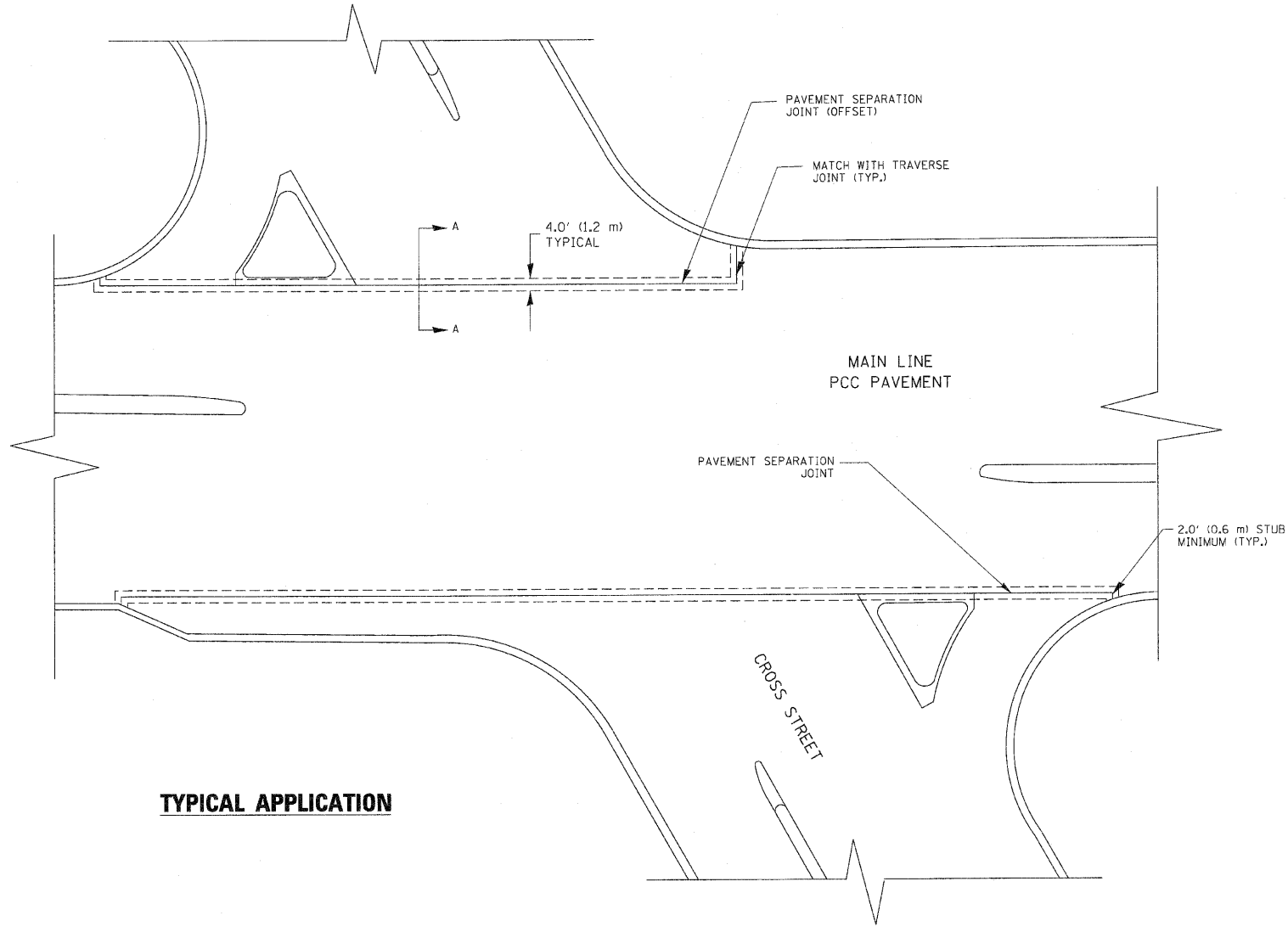
**THE USE OF  
CROSS STREET PAVEMENT SEPARATION JOINTS  
FOR SKEWED OR LARGE INTERSECTIONS  
WHERE JOINTS MAY NOT MATCH**



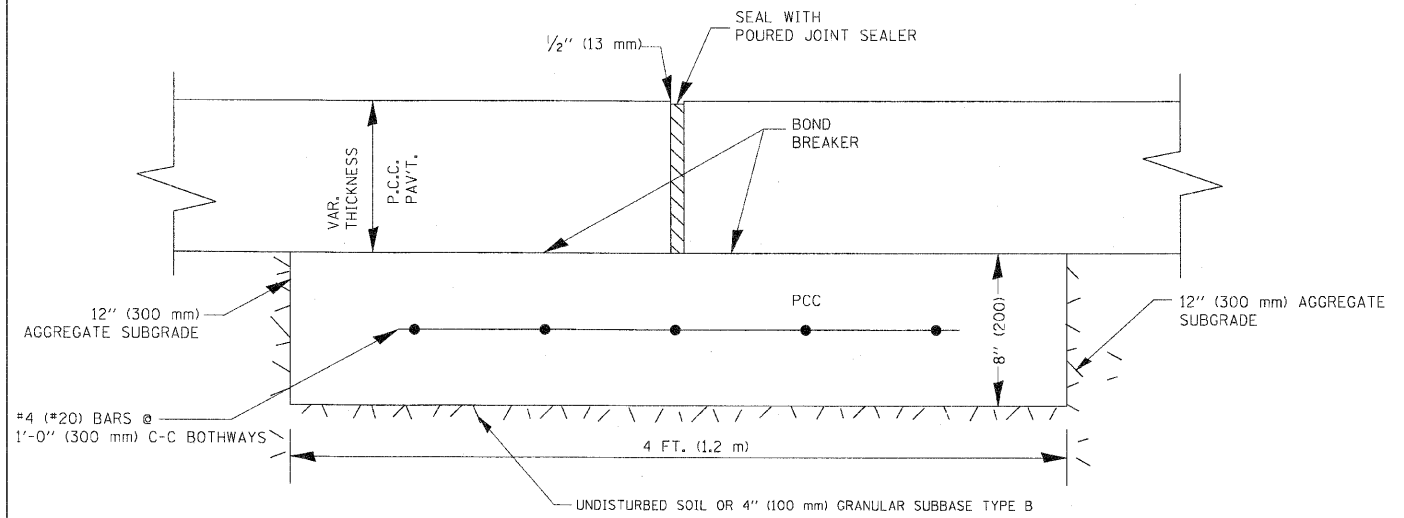
**DESIGNER NOTE:**

1. SMALLER INTERSECTIONS: THE PAVEMENT JOINTS NEED TO BE ALIGNED.\*
2. LARGER INTERSECTIONS (36' OR GREATER) OR INTERSECTIONS WITH A SKEW (70° OR LESS): THE PAVEMENT SEPARATION JOINT SHOULD BE CONSIDERED.
3. IF ENGINEER IS UNABLE TO MATCH JOINTS BETWEEN MAINLINE AND SIDE STREET THE PAVEMENT SEPARATION JOINT SHOULD BE CONSIDERED.
4. AN ALTERNATIVE IS TO INCREASE THE PAVEMENT THICKNESSES BY 1/2" (13 mm) FOR THE LENGTH OF THE AFFECTED PANELS AT THE INTERSECTION.
5. FOR LARGE INTERSECTIONS (6 LANES OR MORE) WHERE JOINTS CAN BE MATCHED, USE #8 (25) DOWEL BARS INSTEAD OF #8 (25) TIE BARS AT EDGE OF MAINLINE PAVEMENT WHEN NO PAVEMENT SEPARATION JOINTS USED.

**PLAN**



**TYPICAL APPLICATION**



**PROPOSED SECTION A-A**

**NOTE:**

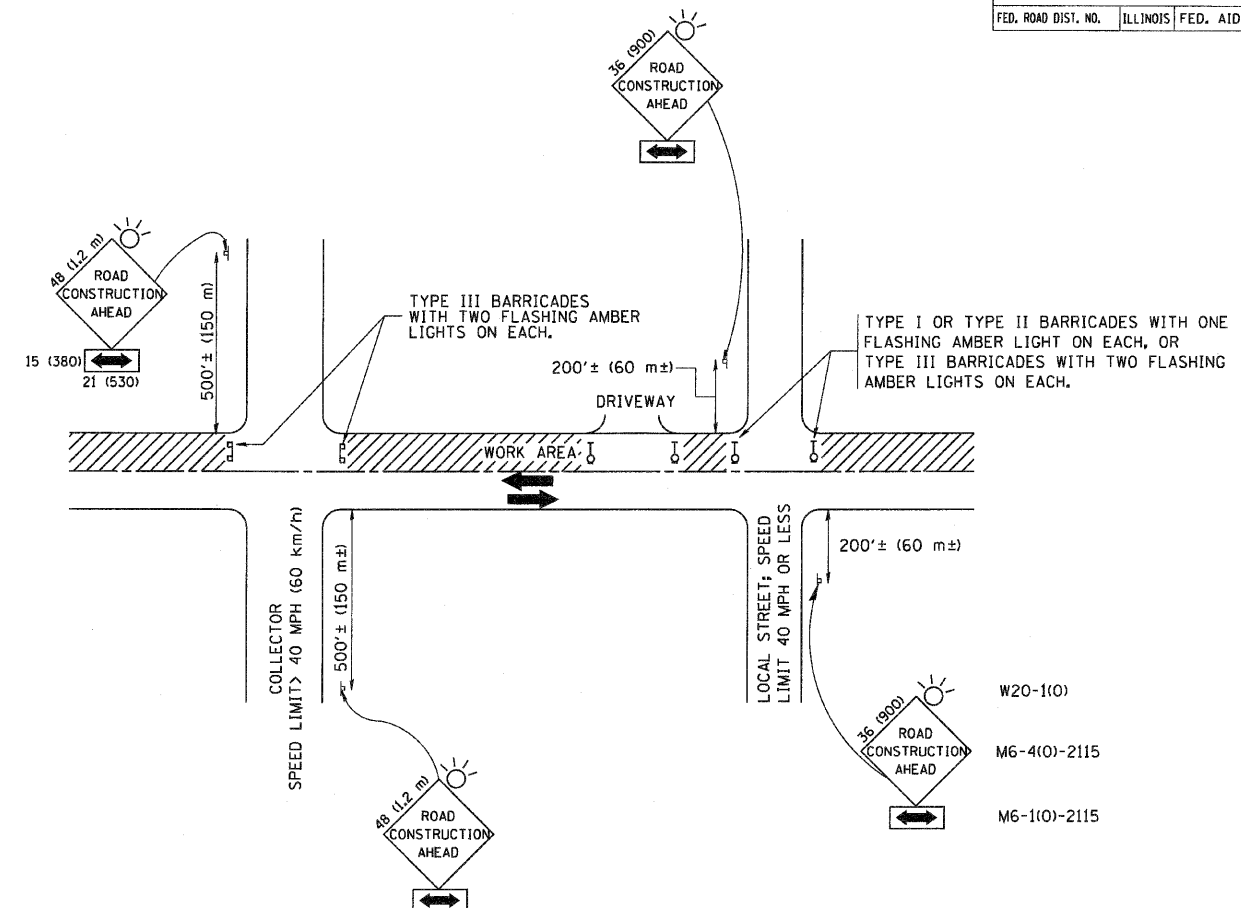
1. JOINT FILLER SHALL CONSIST OF A SHEET OF 1/2" (13 mm) BITUMINOUS PREFORMED FIBER JOINT FILLER CONFORMING TO ARTICLE 1051.03 OF THE STANDARD SPECIFICATIONS.
2. THE JOINT SHALL BE SEALED WITH A HOT POUR JOINT SEALER CONFORMING TO ARTICLE 1050.02 OF THE STANDARD SPECIFICATIONS.
3. A SINGLE LAYER OF FELT ROOFING PAPER SHALL SERVE AS A BOND BREAKER.
4. JOINT SHALL CONTINUE THROUGH COMBINATION CURB & GUTTER OR PCC SHOULDER.
5. PAVEMENT SEPARATION JOINT IS TO BE PAID FOR AS "SLEEPER SLAB" AND IS TO BE MEASURED IN PLACE BY THE LINEAL FOOT.
6. BOND BREAKER AND 1/2" (13 mm) JOINT AND FILLER SHALL BE INCIDENTAL TO THE PAY ITEM "SLEEPER SLAB".

REVISIONS	
NAME	DATE
CADD	6-18-10

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**DETAIL OF PAVEMENT SEPARATION JOINT FOR JOINTED PCC PAVEMENTS AT INTERSECTIONS**  
SCALE: NONE  
DRAWN BY  
CHECKED BY

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 USER NAME = geog1\enob1

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	797
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
  - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
  - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAYS:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION  
TRAFFIC CONTROL AND PROTECTION  
FOR  
SIDE ROADS, INTERSECTIONS, AND  
DRIVEWAYS

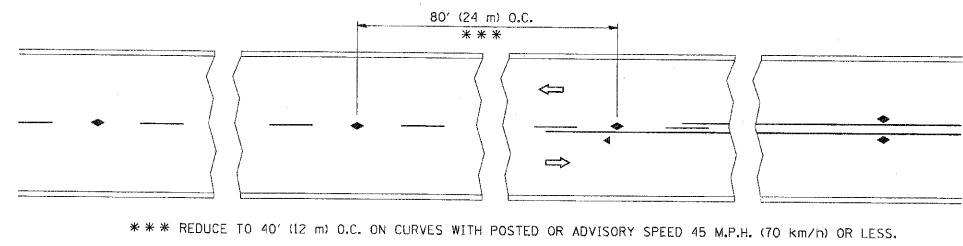
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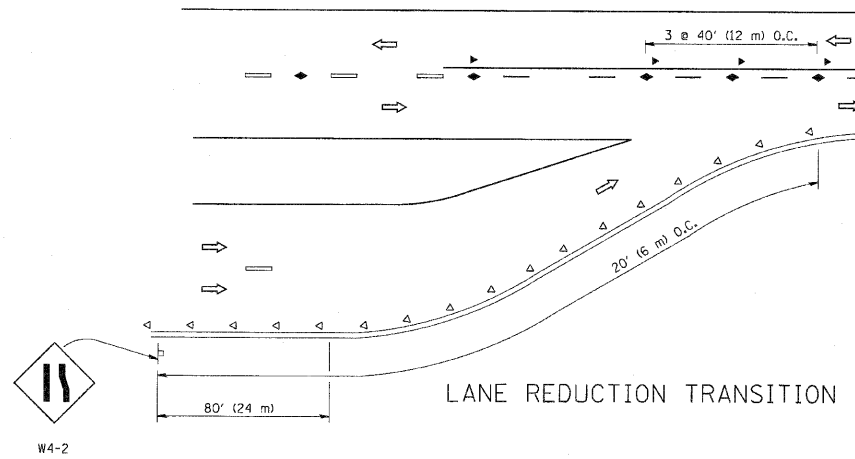
CHECKED BY

TC-10

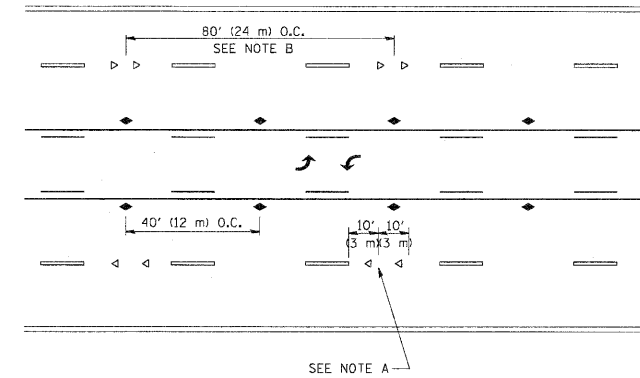
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	798
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



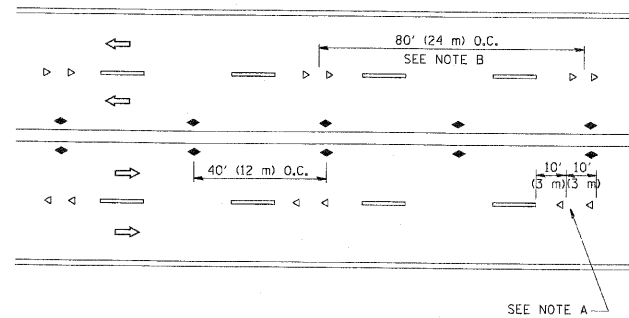
TWO-LANE/TWO-WAY



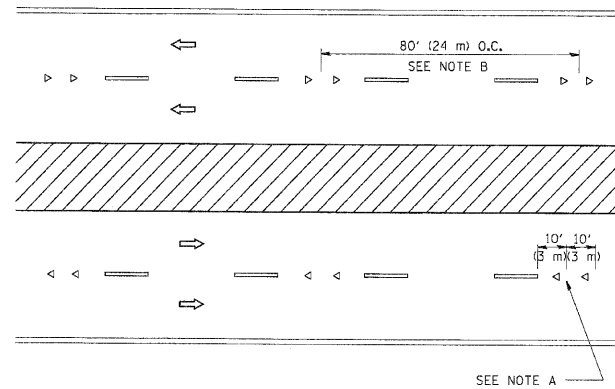
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

All dimensions are in inches (millimeters) unless otherwise shown.

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 TYPICAL APPLICATIONS  
 RAISED REFLECTIVE PAVEMENT  
 MARKERS (SNOW-PLOW RESISTANT)

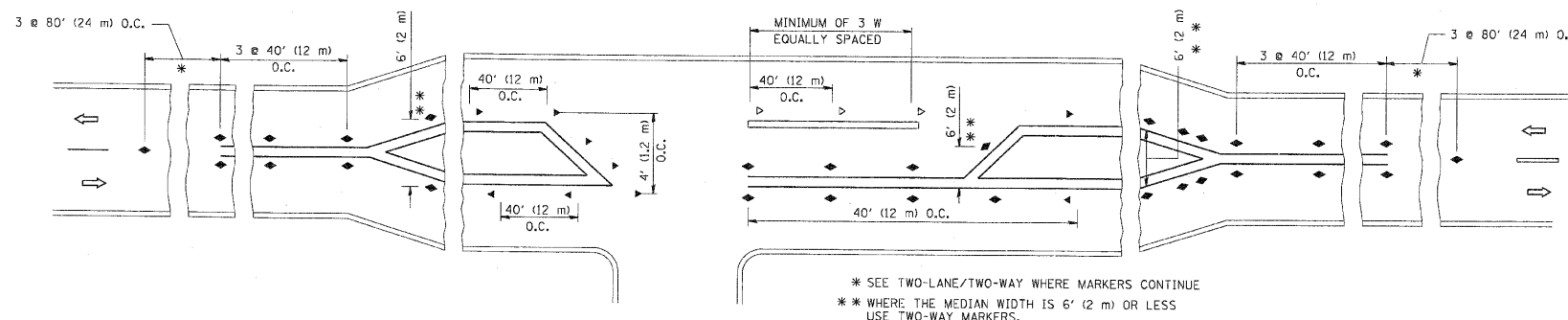
REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00
C. JUCIUS	09-09-09

SCALE: NONE

DRAWN BY CADD

CHECKED BY

TC-11

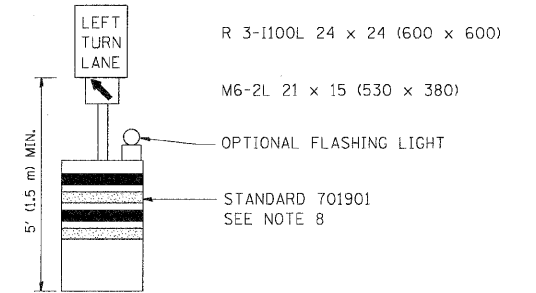
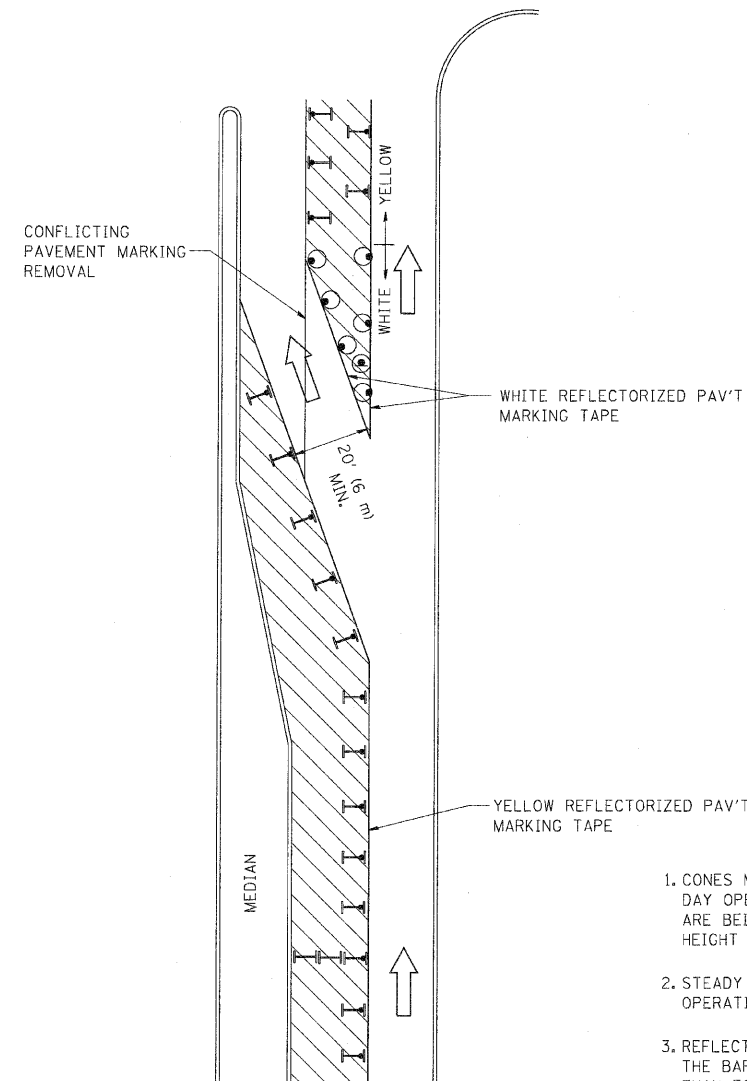


LEFT TURN

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 USER NAME = drivakcogn



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
353	(12&13)WRS-3	WILL	1235	800
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	









GENERAL NOTES

1. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 5' (1.5 m).
2. STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
3. REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
4. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
5. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
7. FORM OPER 725 IS REQUIRED.
8. IF A DRUM OR TYPE II BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.
9. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in Inches (millimeters) unless otherwise shown.

LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

REVISIONS	
NAME	DATE
T. RAMMACHER	09/08/94
A. HOUSEH	11/07/95
A. HOUSEH	10/12/96
T. RAMMACHER	01/06/00
R. BORO	09/14/09

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TRAFFIC CONTROL AND PROTECTION  
 AT TURN BAYS  
 (TO REMAIN OPEN TO TRAFFIC)**

SCALE: NONE

DRAWN BY

CHECKED BY LHA

TC-14