4-29-05 Letting, Item 03A

3A

LA034

VILLAGE OF LANSING
LANSING, ILLINOIS

CONSTRUCTION PLANS
FOR
LANSING MUNICIPAL AIRPORT

CONSTRUCT NORTH QUADRANT SITE WORK - PHASE 1;
CONSTRUCT TAXIWAY G2 EXTENSION;
GLENWOOD-LANSING ROAD INTERSECTION IMPROVEMENTS

DESIGN INFORMATION

APPROACH CATEGORY B
DESIGN GROUP II

LANSING MUNICIPAL AIRPORT

TOWNSHIP: 36 NORTH
RANGE: 15 EAST
COOK COUNTY

BLOOM TOWNSHIP
(SECTION: 8 AND 17)
OPPOSITE GLENWOOD-LANSING ROAD

CALL J.U.L.I.E
BEFORE EXCAVATING
1-800-892-0123

03297-02

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
■SPRINGFIELD, ILLINOIS
■AURORA, ILLINOIS
■ST. LOUIS, MISSOURI
■ROCKFORD, ILLINOIS
■PEORIA, ILLINOIS
■CHICAGO, ILLINOIS
■EDWARDSVILLE, ILLINOIS
■EAST ALTON, ILLINOIS
■COLUMBUS, OHIO

SUBMITTED BY D. Kyle Peabody
D. KYLE PEABODY, P.E.
DATE March 18, 2005

Lansing Municipal airport

APPROVED BY _____ MAYOR
DANIEL PODGORSKI

APPROVED BY Robert R. Malkas AIRPORT MANAGER
ROBERT R. MALKAS

DATE March 3, 2005

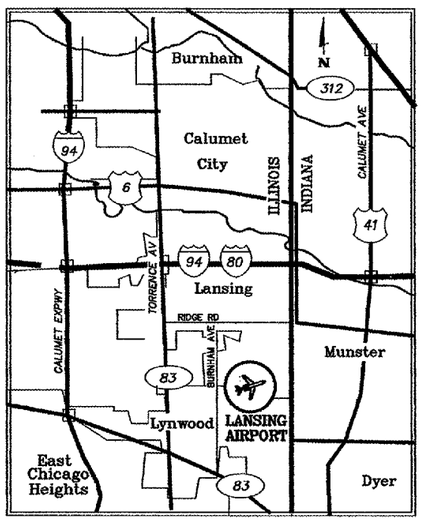
\0329702\CVRSHT

ANTONIO R. MARIN
062-057994
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
3-18-05
EXP. 11-30-05

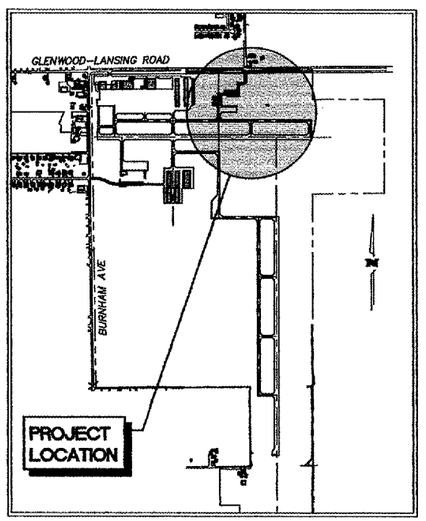
DAVID K. PEABODY
062-048437
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
3-18-05
EXP. 11-30-05

ILLINOIS PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

MARCH 4, 2005



LOCATION MAP



SITE PLAN

INDEX TO SHEETS

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	TOTAL RECORD QUANTITY	TAXIWAY G2 EXTENSION FEDERAL/STATE/LOCAL ESTIMATED QUANTITY	TAXIWAY G2 EXTENSION FEDERAL/STATE/LOCAL RECORD QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 STATE/LOCAL ESTIMATED QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 STATE/LOCAL RECORD QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 LOCAL ONLY ESTIMATED QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 LOCAL ONLY RECORD QUANTITY	ROADWAY INTERSECTION STATE/LOCAL ESTIMATED QUANTITY	ROADWAY INTERSECTION STATE/LOCAL RECORD QUANTITY
IDOT – STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS SPECIFIED ITEMS												
AR108030	1/C #3/0 600 V UG CABLE	LF	750		750		–		–		–	
AR108158	1/C #8 5 KV UG CABLE IN UD	LF	2550		2,550		–		–		–	
AR108406	1/C #6 600 V UG CABLE	LF	2550		–		2,550		–		–	
AR108752	1/C #2 GROUND	LF	75		–		75		–		–	
AR108760	1/C #10 GROUND	LF	1050		–		1,050		–		–	
AR110212	2" STEEL DUCT, DIRECT BURY	LF	50		–		50		–		–	
AR110214	4" STEEL DUCT, DIRECT BURY	LF	180		–		–		180		–	
AR110217	1 1/2" STEEL DUCT, DIRECT BURY	LF	1050		–		1,050		–		–	
AR110504	4-WAY CONCRETE ENCASED DUCT	LF	135		135		–		–		–	
AR110550	SPLIT DUCT	LF	260		200		60		–		–	
AR110610	ELECTRICAL HANDHOLE	EACH	3		–		3		–		–	
AR125100	ELEVATED RETROREFLECTIVE MARKER	EACH	16		–		16		–		–	
AR125410	MITL –STAKE MOUNTED	EACH	31		31		–		–		–	
AR125415	MITL – BASE MOUNTED	EACH	6		6		–		–		–	
AR125443	TAXI GUIDANCE SIGN, 3 CHARACTER	EACH	1		1		–		–		–	
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	1		1		–		–		–	
AR125445	TAXI GUIDANCE SIGN, 5 CHARACTER	EACH	2		2		–		–		–	
AR125470	MODIFY EXISTING SIGN PANEL	EACH	1		1		–		–		–	
AR125901	REMOVE STAKE MOUNTED LIGHT	EACH	4		4		–		–		–	
AR150510	ENGINEER'S FIELD OFFICE	LS	1		1		–		–		–	
AR152419	UNCLASSIFIED DISPOSAL OFFSITE	CY	21729		650		21,079		–		–	
AR152540	SOIL STABILIZATION FABRIC	SY	12620		2,200		9,700		720		–	
AR156510	SILT FENCE	LF	2250		–		2,250		–		–	
AR156511	DITCH CHECK	EACH	19		–		19		–		–	
AR156512	BALES	EACH	224		64		160		–		–	
AR156531	EROSION CONTROL BLANKET	SY	10250		1,045		9,205		–		–	
AR156541	RIPRAP–GRADATION NO. 1	SY	110		–		110		–		–	
AR156542	RIPRAP–GRADATION NO. 2	SY	30		–		30		–		–	
AR162506	CLASS E FENCE 6'	LF	400		400		–		–		–	
AR162612	CLASS E GATE–12'	EACH	2		2		–		–		–	
AR162724	ELECTRICAL GATE 24'	EACH	1		1		–		–		–	
AR162960	RELOCATE CLASS E FENCE	LF	529		529		–		–		–	
AR201610	BITUMINOUS BASE COURSE	TON	1816		311		1,405		100		–	
AR208515	POROUS GRANULAR EMBANKMENT	CY	608		118		490		–		–	
AR208604	4" AGGREGATE BASE COURSE	SY	6140		–		5,600		540		–	
AR209607	CRUSHED AGG. BASE COURSE – 7"	SY	6140		–		5,600		540		–	
AR209608	CRUSHED AGG. BASE COURSE – 8"	SY	4280		–		4,100		180		–	
AR209611	CRUSHED AGGREGATE BASE COURSE – 11"	SY	2200		2,200		–		–		–	
AR401610	BITUMINOUS SURFACE COURSE	TON	1092		187		845		60		–	
AR401900	REMOVE BITUMINOUS PAVEMENT	SY	71		52		19		–		–	
AR401910	REMOVE & REPLACE BIT. PAVEMENT	SY	20		–		20		–		–	
AR510510	TIE DOWN	EACH	12		–		12		–		–	
AR510515	GROUND ROD	EACH	2		–		2		–		–	
AR602510	BITUMINOUS PRIME COAT	GAL	5955		1,100		4,500		355		–	
AR603510	BITUMINOUS TACK COAT	GAL	1773		316		1,350		107		–	
AR620520	PAVEMENT MARKING – WATERBORNE	SF	2770		1,300		1,470		–		–	
AR701006	6" PVC STORM SEWER	LF	190		40		150		–		–	
AR701184	PRECAST CONC. BOX CULVERT 8' X 4'	LF	216		–		216		–		–	
AR701512	12" RCP, CLASS IV	LF	65		25		40		–		–	
AR701515	15" RCP, CLASS IV	LF	465		–		465		–		–	
AR701518	18" RCP, CLASS IV	LF	675		170		505		–		–	
AR701524	24" RCP, CLASS IV	LF	116		116		–		–		–	
AR701900	REMOVE PIPE	LF	210		125		85		–		–	
AR705526	6" PERFORATED UNDERDRAIN W/SOCK	LF	1720		915		805		–		–	
AR705635	UNDERDRAIN COLLECTION STRUCTURE	EACH	2		1		1		–		–	
AR705900	REMOVE UNDERDRAIN	LF	760		600		160		–		–	
AR751411	INLET–TYPE A	EACH	2		–		2		–		–	
AR751540	MANHOLE 4'	EACH	5		–		5		–		–	
AR751900	REMOVE INLET	EACH	1		–		1		–		–	
AR752412	PRECAST REINFORCED CONC. FES 12"	EACH	1		1		–		–		–	
AR752415	PRECAST REINFORCED CONC. FES 15"	EACH	1		–		1		–		–	
AR752418	PRECAST REINFORCED CONC. FES 18"	EACH	10		4		6		–		–	
AR752424	PRECAST REINFORCED CONC. FES 24"	EACH	2		2		–		–		–	
AR752512	GRATING FOR CONC. FES 12"	EACH	1		1		–		–		–	
AR752515	GRATING FOR CONC. FES 15"	EACH	1		–		1		–		–	
AR752518	GRATING FOR CONC. FES 18"	EACH	10		4		6		–		–	
AR752524	GRATING FOR CONC. FES 24"	EACH	2		2		–		–		–	
AR752900	REMOVE END SECTION	EACH	2		2		–		–		–	
AR754410	COMB. CONCRETE CURB & GUTTER	LF	1350		–		1,350		–		–	
AR754610	PAVED DITCH	LF	2600		1,200		1,400		–		–	
AR754915	REMOVE CONCRETE FLUME	LF	130		130		–		–		–	
AR760506	6" DUCTILE IRON WATER MAIN	LF	30		–		30		–		–	
AR760508	8" DUCTILE IRON WATER MAIN	LF	20		–		20		–		–	
AR760512	12" DUCTILE IRON WATER MAIN	LF	1750		–		1,750		–		–	
AR760800	FIRE HYDRANT	EACH	3		–		3		–		–	
AR760830	WATER VALVE	EACH	2		–		2		–		–	
AR760860	TAPPING VALVE & SLEEVE	EACH	1		–		1		–		–	
AR800001	TYPE 1 INLET	EACH	6		3		3		–		–	
AR800012	BOX CULVERT END SECTION 8' X 4'	EACH	6		–		6		–		–	
AR800020	BORING AND JACKING	LF	143		–		143		–		–	
AR800043	TYPE 2 INLET	EACH	1		1		–		–		–	
AR800048	DRAINAGE GATE 30"	EACH	1		1		–		–		–	
AR800088	5" STEEL DUCT, DIRECT BURY	LF	200		–		–		200		–	
AR800097	RESTRICTOR PLATE – TYPE A	EACH	3		3		–		–		–	
AR800098	RESTRICTOR PLATE – TYPE B	EACH	1		–		1		–		–	
AR800099	LINE STOP, 8"	EACH	1		–		1		–		–	
AR800100	ELECTRIC SERVICE RELOCATION	LS	1		–		1		–		–	
AR800103	EMBANKMENT FILL	CY	22054		649		21,405		–		–	
AR800104	SHOULDER FILL	CY	3151		671		2,480		–		–	
AR800105	1/C #4/0 600V UG CABLE	LF	120		–		120		–		–	
AR800106	STEEL PLATE BEAM GUARDRAIL – TYPE A	LF	280		–		280		–		–	
AR800107	STEEL PLATE BEAM GUARDRAIL – TYPE B	LF	65		–		65		–		–	
AR800189	GABION EROSION CONTROL	CY	80		–		80		–		–	
AR901511	SEEDING – FORMULA 1	ACRE	19.2		2.8		16.4		–		–	
AR901512	SEEDING – FORMULA 2	ACRE	0.7		–		0.7		–		–	

ITEM NO.	DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	TOTAL RECORD QUANTITY	TAXIWAY G2 EXTENSION FEDERAL/STATE/LOCAL ESTIMATED QUANTITY	TAXIWAY G2 EXTENSION FEDERAL/STATE/LOCAL RECORD QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 STATE/LOCAL ESTIMATED QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 STATE/LOCAL RECORD QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 LOCAL ONLY ESTIMATED QUANTITY	NORTH QUADRANT SITEWORK – PHASE 1 LOCAL ONLY RECORD QUANTITY	ROADWAY INTERSECTION STATE/LOCAL ESTIMATED QUANTITY	ROADWAY INTERSECTION STATE/LOCAL RECORD QUANTITY
IDOT – STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS SPECIFIED ITEMS												
AR804510	SODDING	SY	275		–		275.0		–		–	
AR905510	TOPSOILING (FROM ON SITE)	CY	8169		1,197		6,972.0		–		–	
AR908510	MULCHING	ACRE	17.1		2.6		14.5		–		–	
AR910101	ROADWAY LIGHT POLE, TYPE A	EACH	3		–		3		–		–	
AR910102	ROADWAY LIGHT POLE, TYPE B	EACH	2		–		2		–		–	
AR910161	ROADWAY LIGHTING TRANSCLOSURE	LS	1		–		1		–		–	
AR910200	ROADWAY SIGN	EACH	7		–		7		–		–	
AR910975	RELOCATE ROADWAY SIGN	EACH	1		–		1		–		–	
IDOT – STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SPECIFIED ITEMS												
20200500	EARTH EXC WID	CY	140		–		–		–		140	
31101400	SUB GRAN MAT B 6	SY	100		–		–		–		100	
42000501	PCC PVT 10 JOINTED	SY	425		–		–		–		425	
44000100	PAVEMENT REM	SY	30		–		–		–		30	
44000500	COMB CURB GUTTER REM	LF	620		–		–		–		620	
44003100	MEDIAN REMOVAL	SF	3400		–		–		–		3,400	
44003800	MEDIAN SURF REMOVAL	SF	1600		–		–		–		1,600	
60250500	CB ADJ NEW T1F CL	EACH	2		–		–		–		2	
60608300	COMB CC&G TM2.12	LF	175		–		–		–		175	
60618200	BIT MEDIAN SURF	SF	1170		–		–		–		1,170	
60623714	CONC MEDIAN SPL	SF	830		–		–		–		830	
60623745	CONC MEDIAN TRANS	SF	360		–		–		–		360	
70102635	TR CONT & PROT 701701	LS	1		–		–		–		1	
72000100	SIGN PANEL T1	SF	9		–		–		–		9	
72000200	SIGN PANEL T2	SF	12		–		–		–		12	
72400800	REMOV SIGN COMPLETE	SF	18		–		–		–		18	
72400900	REMOV SIGN PANEL	EACH	1		–		–		–		1	
78001100	PT PVT MK LTRS & SYMB	SF	100		–		–		–		100	
78001130	PAINT PVT MK LINE 6	LF	225		–		–		–		225	
78001180	PAINT PVT MK LINE 24	LF	12		–		–		–		12	
78300100	PAVT MARKING REMOVAL	SF	100		–		–		–		100	
81000300	CON T 1 GALVS	LF	65		–		–		–		65	
81000600	CON T 2 GALVS	LF	220		–		–		–		220	
81000700	CON T 2 1/2 GALVS	LF	200		–		–		–		200	
81001000	CON T 4 GALVS	LF	20		–		–		–		20	
81018500	CON P 2 GALVS	LF	47		–		–		–		47	
81400100	HANDHOLE	EACH	1		–		–		–		1	
81400200	HD HANDHOLE	EACH	2		–		–		–		2	
85000200	MAIN EX TR SIG INSTAL	EACH	1		–		–		–		1	
87301225	ELCBL C SIGNAL 14 3C	LF	250		–		–		–		250	
87301245	ELCBL C SIGNAL 14 5C	LF	650		–		–		–		650	
87301255	ELCBL C SIGNAL 14 7C	LF	650		–		–		–		650	
87301305	ELCBL C LEAD 14 1PR	LF	1440		–		–		–		1,440	
87702850	STL COMB MAA&P 24	EACH	1		–		–		–		1	
87702870	STL COMB MAA&P 28	EACH	1		–		–		–		1	
87800400	CONC FDN TY E 30D	LF	45		–		–		–		45	
88000170	SH 1F 3S MAM	EACH	1		–		–		–		1	
88000290	SH 1F 5S MAM	EACH	3		–		–		–		3	
88200210	TS BACKPLATE LOU ALUM	EACH	4		–		–		–		4	
88500100	INDUCTIVE LOOP DETECT	EACH	3		–		–		–		3	
88600100	DET LOOP T1	LF	350		–		–		–		350	
88700300	LIGHT DETECTOR AMP	EACH	1		–		–		–		1	
89000100	TEMP TR SIG INSTALL	EACH	1		–		–		–		1	
89500100	RELOC EX SIG HEAD	EACH	1		–		–		–		1	
89501250	RELOC EX TS EQUIP	EACH	2		–		–		–		2	
89501400	REL EM VEH PR SYS D U	EACH	1		–		–		–		1	
89502200	MOD EX CONTR	EACH	1		–		–		–		1	
89502300	REM ELCBL FR CON	LF	1500		–		–		–		1,500	
89502575	REMOV EX TS EQUIP	EACH	1		–		–		–		1	
89502585	REMOV EX CONC FDN	EACH	3		–		–		–		3	
X0322494	CURB CUT	LF	65		–		–		–		65	
X0323336	LED SF RETRO RED BALL	EACH	6		–		–		–		6	
X0323337	LED SF RETRO GRN BALL	EACH	6		–		–		–		6	
X0323418	LED SF RETRO YEL BALL	EACH	6		–		–		–		6	
X0323419	LED SF RETRO YEL AROW	EACH	1		–		–		–		1	
X0323420	LED SF RETRO GRN AROW	EACH	1		–		–		–		1	
X0323421	LED SF RETRO WALK SIG	EACH	2		–		–		–		2	
X0323422	LED SF RETRO DONT WLK	EACH	2		–		–		–		2	
X8730250	ELCBL C 20 3C TW SH	LF	250		–		–		–		250	
X8950215	RELOC EXIST HANDHOLE	EACH	1		–		–		–		1	
X8950215	RE-OPTIMIZE TR SIG SY	LS	1		–		–		–		1	
Z0001050	AGG SUBGRADE 12	SY	410		–		–		–		410	

NOTES:

WORK WITHIN COOK COUNTY RIGHT–OF–WAY SHALL BE PAID FOR UNDER IDOT–STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SPECIFIED PAY ITEMS EXCEPT FOR THE FOLLOWING:

- ACCESS DRIVE PAVEMENT WITH CURB AND GUTTER
- LANDSCAPING AND TOPSOIL PLACEMENT
- WATERMAIN INCLUDING BORING AND JACKING

THE ABOVE LISTED ITEMS SHALL BE PAID FOR UNDER IDOT–STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS SPECIFIED PAY ITEMS

LA034

PATH: K:\0051101\sheets\
FILE: qty.dwg
UPDATE BY: tmarin
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Tue 4/23/04 11:16am

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

SUMMARY OF QUANTITIES

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	ARM
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297–02

IL PROJECT: IGQ–3329
A.I.P. PROJECT: 3–17–0121–B21

HORIZONTAL/VERTICAL CONTROL

NO.	STATION/OFFSET	ELEVATION	NORTHING	EASTING	DESCRIPTION
1	311+98.00 ℄ TAXIWAY G2	–	1775650.38	719616.74	INTERSECTION CENTERLINE TAXIWAY G2 AND CENTERLINE TAXIWAY G3
2	314+48.10 ℄ TAXIWAY G2	–	1775900.49	719615.00	INTERSECTION CENTERLINE TAXIWAY G2 AND CENTERLINE RUNWAY 9/27
3	316+98.10 ℄ TAXIWAY G2	–	1776150.48	719613.26	INTERSECTION CENTERLINE TAXIWAY G2 AND CENTERLINE TAXIWAY A
4	318+54.10 ℄ TAXIWAY G2	–	1776306.46	719612.18	INTERSECTION CENTERLINE TAXIWAY G2 AND APRON BASELINE
5	321+26.10 ℄ TAXIWAY G2	–	1776578.44	719610.29	INTERSECTION CENTERLINE TAXIWAY G2 AND ENTRANCE ROAD BASELINE
6	318+54.10, 300' RT, ℄ TAXIWAY G2	–	1776308.55	719912.17	EDGE OF APRON
7	502+28.16, ℄ ENTRANCE RD.	–	1776580.67	719938.43	ENTRANCE ROAD BASELINE
8	503+44.19, ℄ ENTRANCE RD.	–	1776696.69	719937.64	INTERSECTION ENTRANCE ROAD BASELINE AND BORROW SITE BASELINE
9	504+14.16, ℄ ENTRANCE RD.	–	1776766.67	719937.16	ENTRANCE ROAD BASELINE
10	507+66.32, ℄ ENTRANCE RD.	–	1776995.72	720057.12	INTERSECTION ENTRANCE ROAD BASELINE AND CENTERLINE GLENWOOD–LANSING ROAD
11	505+38.08, ℄ ENTRANCE RD.	–	1776767.51	720061.07	ENTRANCE ROAD BASELINE
12	18+50, ℄ BORROW SITE	–	1776703.11	720882.46	END OF BORROW SITE BASELINE
13	507+72.06, 99.53' LT, ℄ ENTRANCE RD.	–	1776999.75	719957.72	PK NAIL ON GLENWOOD–LANSING ROAD MEDIAN
14	325+30.13, 498.64 LT, ℄ TAXIWAY G2	–	1776979.01	719108.85	PK NAIL ON GLENWOOD–LANSING ROAD MEDIAN
BM1	3+10.61, 215.31' RT, ℄ RUNWAY 9/27	613.53	1776979.01	719108.85	AZ MARKER "LANSPORT" (ROD IN CAN)
BM2	23+37.02, 209.83' RT, ℄ RUNWAY 9/27	613.56	1776979.01	719108.85	MARKER "LANSPORT 1990" (ROD IN CAN)
BM3	37+49.70, 195.54' RT, ℄ RUNWAY 9/27	613.69	1776979.01	719108.85	GPS IGOA MONUMENT
BM4	146+22.30, 582.00' RT, ℄ RUNWAY 18/36	614.13	1776979.01	719108.85	CHISELED "X" ON CONCRETE BOX CULVERT

LA034

PATH: K:\LansingAp\0329702\draw\sheet
FILE: site.dwg
UPDATE BY: tmarin
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Fri 3/19/04 10:40am

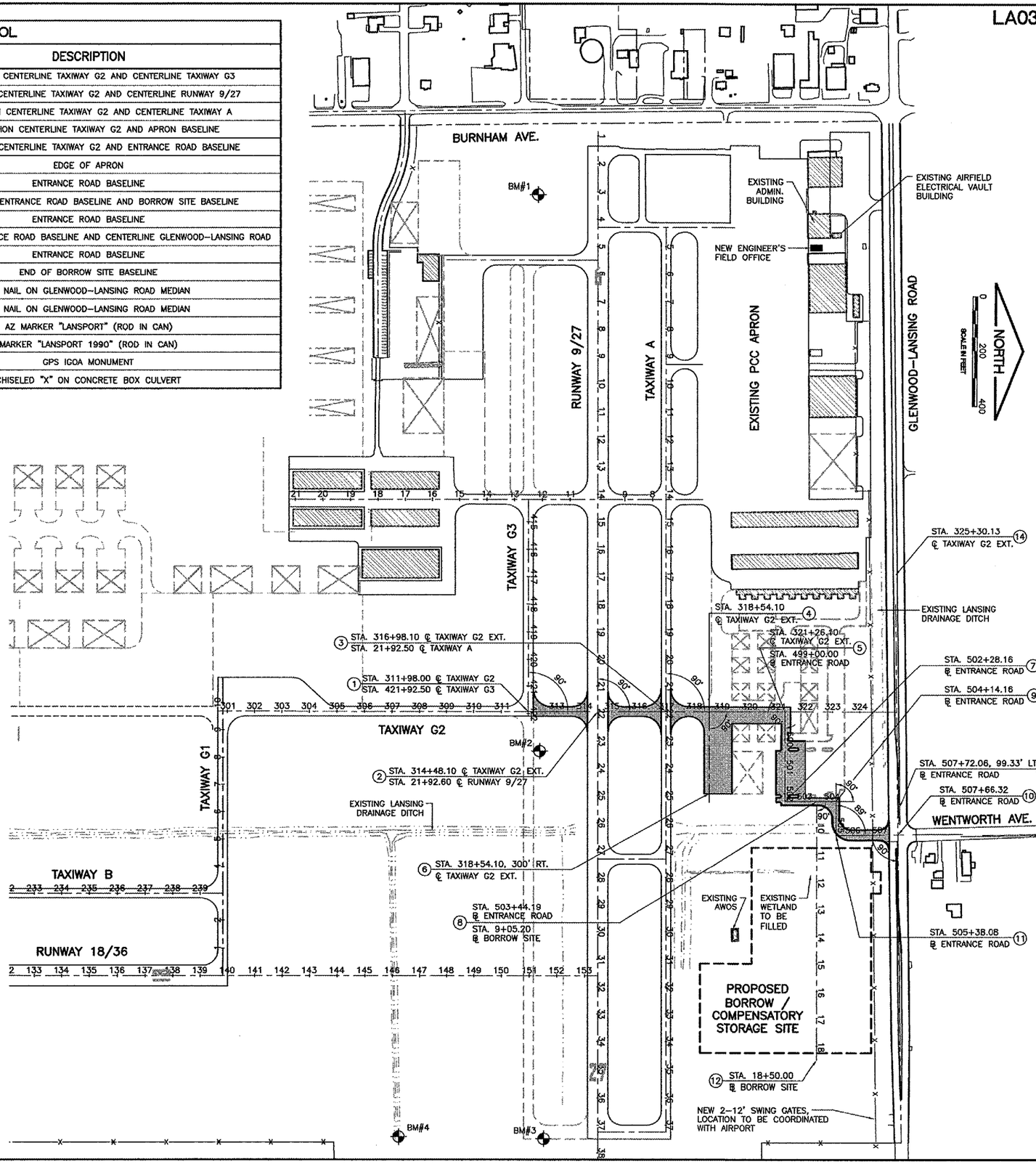
REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LEGEND

- NEW PAVEMENT
- EXISTING BUILDING
- EXISTING PAVEMENT
- PROPOSED BORROW SITE
- BENCHMARK/CONTROL POINT
- AIRPORT PROPERTY LINE
- FUTURE/PROPOSED HANGAR (BY OTHERS)



LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

SITE PLAN/HORIZONTAL AND VERTICAL CONTROL PLAN

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: ICQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SHEET 3 OF 50 SHEETS

GENERAL NOTES

1. THE SUGGESTED SEQUENCE OF CONSTRUCTION SHOWN IS INTENDED TO ALLOW FOR THE ORDERLY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS WHILE MAINTAINING AIRCRAFT ACCESS AT ALL TIMES. THE PHASING SHOWN IS A SUGGESTED SEQUENCE OF CONSTRUCTION ONLY. THIS SEQUENCE MAY BE MODIFIED HOWEVER, ALTERNATE STAGING PLANS MUST MAINTAIN AIRPORT OPERATIONS TO THE SATISFACTION OF THE AIRPORT MANAGER AND RESIDENT ENGINEER AND BE APPROVED BY THE DIVISION OF AERONAUTICS AND FEDERAL AVIATION ADMINISTRATION.

2. ALL OPERATIONS SHALL BE IN CONFORMANCE WITH AC 150/5370-2E (LATEST EDITION) SAFETY DURING CONSTRUCTION.

3. CONTRACTOR'S EQUIPMENT SHALL BE STORED IN THE EQUIPMENT AND MATERIAL STORAGE AREA WHEN CONSTRUCTION IS NOT IN PROGRESS.

4. THE AIRPORT MANAGER IN CONSULTATION WITH THE RESIDENT ENGINEER SHALL HAVE FINAL SAY IN THE APPROVAL OF THE CONSTRUCTION OPERATING SEQUENCE AS IT RELATES TO PEDESTRIAN, VEHICULAR AND AIRCRAFT SAFETY.

5. ALL EXISTING PAVEMENTS, DRIVES OR ANY OTHER AREAS USED AS A HAUL ROAD OR STORAGE AREA BY THE CONTRACTOR SHALL BE RESTORED IN KIND TO THEIR PRE-CONSTRUCTION CONDITION OR TO THE SATISFACTION OF THE RESIDENT ENGINEER AND AIRPORT MANAGER. THE COST OF MAINTAINING, REPAIRING OR CONSTRUCTING THESE PAVEMENTS AND AREAS SHALL BE INCIDENTAL TO THE CONTRACT. EXISTING AREAS OUTSIDE THE PROJECT LIMITS WHICH ARE DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY HIM AT HIS EXPENSE TO THE SATISFACTION OF THE RESIDENT ENGINEER AND THE AIRPORT MANAGER.

6. THE CONTRACTOR SHALL KEEP ALL TRUCKS, EQUIPMENT AND MATERIALS OFF OF THE EXISTING TAXIWAYS, APRONS AND RUNWAYS OUTSIDE OF THE PROJECT LIMITS EXCEPT AS SHOWN OR WITH THE PRIOR PERMISSION OF THE ENGINEER.

7. WORK PERFORMED BY THE CONTRACTOR OUTSIDE OF DAYLIGHT HOURS SHALL BE DONE UNDER SUFFICIENT ARTIFICIAL LIGHTING TO ALLOW FOR PROPER CONSTRUCTION METHODS AND INSPECTIONS. LIGHT SHALL CONSIST OF MOVABLE POLE MOUNTED FLOODLIGHTS AND/OR SPOTLIGHTS OF SUFFICIENT NUMBER TO ILLUMINATE THE WORK AREA. VEHICLE HEADLIGHTS WILL BE ALLOWED ONLY IN ADDITION TO OTHER LIGHTS MENTIONED ABOVE. LIGHTING SHALL BE AS APPROVED BY THE ENGINEER AND SHALL NOT BE USED IF THEY AFFECT FLIGHT SAFETY. CONTRACTOR'S WORK HOURS SHALL BE IN ACCORDANCE WITH LOCAL ORDINANCES.

8. THE CONTRACTOR SHALL PROVIDE PORTABLE FLOOD LIGHTING FOR NIGHTTIME CONSTRUCTION. SUFFICIENT UNITS SHALL BE PROVIDED SO THAT WORK AREAS ARE ILLUMINATED TO A LEVEL OF FIVE HORIZONTAL FOOT CANDLES. THE LIGHTING LEVELS SHALL BE CALCULATED AND MEASURED IN ACCORDANCE WITH THE CURRENT STANDARDS OF THE ILLUMINATION ENGINEERING SOCIETY. LIGHTS SHALL BE POSITIONED SO AS NOT TO INTERFERE WITH AIRPORT OPERATIONS.

9. THE CONTRACTOR WILL BE REQUIRED TO HAVE A SWEEPER AVAILABLE FOR USE AT ALL TIMES. WHEN ACTIVE AIRFIELD PAVEMENTS ARE UTILIZED AS HAUL ROADS BY THE CONTRACTOR, MATERIAL TRACKED ON TO THE PAVEMENT SHALL BE CONTINUALLY REMOVED WITH SAID SWEEPER. THIS SWEEPING SHALL NOT BE PAID FOR SEPERATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

10. MATERIALS REMOVED FROM THE PROJECT WILL BE DISPOSED OF OFF AIRPORT PROPERTY, UNLESS NOTED OTHERWISE.

11. FOR WORK ON AIRPORT PROPERTY: PAYMENT FOR TRAFFIC CONTROL INCLUDING, BUT NOT LIMITED TO BARRICADES, SIGNING, RUNWAY CLOSED MARKERS, AIR OPERATIONS AREA (A.O.A.) LATHE AND RIBBON, ETC. SHALL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. BARRICADES AT 10-FOOT CENTERS WITH ONE ORANGE FLAG (24" x 24") BETWEEN EACH SET OF BARRICADES SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. BARRICADES SHALL BE WEIGHTED TO PREVENT BLOWING OVER. BARRICADES SHALL HAVE A FLASHING **RED** LIGHT AND CONFORM TO IDOT STANDARD 702001, TYPE II. BARRICADE INSTALLATION WILL BE REQUIRED PRIOR TO ACCESS TO THE A.O.A. BY CONTRACTOR'S WORKERS, EQUIPMENT OR MATERIAL. SIGNS SHALL BE PLACED AT EACH TAXIWAY/RUNWAY CLOSURE LOCATION AND SHALL BE ATTACHED TO THE BARRICADES. EACH BARRICADE LOCATION SHALL CONSIST OF ONE "DO NOT ENTER" SIGN AND ONE "AIRCRAFT MOVEMENT AREA" SIGN. SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

12. THE CONTRACTOR SHALL CONTACT THE AIRPORT MANAGER (5) WORKING DAYS IN ADVANCE OF THE START OF CONSTRUCTION SO THAT THE APPROPRIATE NOTAMS MAY BE ISSUED.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL CONSTRUCTION ACCESS GATES CLOSED DURING NON WORKING HOURS. THE CONTRACTOR SHALL PROVIDE A SIGN AT THE ACCESS GATE SAYING "AUTHORIZED PERSONNEL ONLY". THE CONTRACTOR SHALL CLOSE AND LOCK THE ACCESS GATE UPON LEAVING THE SITE. THROUGHOUT THE DURATION OF THE CONTRACT, ANY DAMAGES TO THE ACCESS ROAD, ACCESS GATE OR FENCING ADJACENT TO THE PROJECT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE RESIDENT ENGINEER. ALL COST RELATING TO CONTRACTOR'S ACCESS AND SECURITY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

14. CONTRACTOR WILL BE REQUIRED TO PUT AIRPORT FLAGS AND HAVE BEACON LIGHTS ON ALL EQUIPMENT AT ALL TIMES DURING CONSTRUCTION. SEE FLAG DETAIL, THIS SHEET.

15. IN THE CASE OF AN EMERGENCY, CONTRACTOR SHALL NOTIFY AIRPORT MANAGER AND THE ENGINEER IMMEDIATELY.

16. DURING ADVERSE WEATHER, THE CONTRACTOR SHALL MAKE PROVISIONS FOR ACCESS TO THE WORK AT NO ADDITIONAL COST TO THE CONTRACT. NO EXTENSION OF CONTRACT TIME WILL BE CONSIDERED FOR DELAYS DUE TO LACK OF ADEQUATE ACCESS TO THE WORK.

17. THE TALLEST PIECE OF CONSTRUCTION EQUIPMENT IS ANTICIPATED TO BE AN ASPHALT/STONE TRUCK WHICH HAS A MAXIMUM HEIGHT OF 18 FEET IN A DUMP POSITION.

18. IF RUNWAY NUMERALS ARE PRESENT DURING CONSTRUCTION THEN CONTRACTOR SHALL PLACE CLOSED RUNWAY MARKER OVER NUMERALS AS DETAILED, OTHERWISE PLACE RUNWAY CLOSED MARKER IN TURF AT ENDS OF RUNWAY AS DETAILED.

19. LANSING MUNICIPAL AIRPORT WILL BE IN OPERATION DURING THE CONSTRUCTION OF THIS PROJECT. COORDINATION OF WORK WITH THE AIRPORT IS MANDATORY SO AS TO MINIMIZE IMPACTS ON AIRPORT OPERATIONS.

20. APPROXIMATE LOCATION OF HAUL ROUTES ON THE AIRPORT SITE ARE SHOWN ON THE GENERAL PROJECT LAYOUT AND THE PHASING PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE ROADS USED AS HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROUTES SHALL BE JOINTLY INSPECTED AND DETERMINED BY THE CONTRACTOR AND THE ENGINEER. FENCING, DRAINAGE, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT TEMPORARY HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S TOTAL RESPONSIBILITY AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE WORK. ALL ON-SITE ACCESS ROADS TO AIRPORT FACILITIES SHALL REMAIN OPEN AND MAINTAINED AT ALL TIMES.

21. MOBILIZATION/EQUIPMENT STORAGE AREA WILL BE MADE AVAILABLE FOR CONTRACTOR'S MOBILIZATION AND STORAGE AS SHOWN ON THE PLANS. THIS AREA SHALL BE RESTORED TO THE ORIGINAL CONDITION UPON COMPLETION OF THE PROJECT AT THE CONTRACTOR'S EXPENSE.

22. LOCATION OF KNOWN EXISTING AIRPORT UNDERGROUND CABLES ARE SHOWN ON THE PLANS AND MUST BE VERIFIED BY THE CONTRACTOR. REPAIR OF DAMAGED CABLE MUST BE STARTED IMMEDIATELY AND CONTINUED UNTIL COMPLETED. ALL SUCH REPAIRS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, OR AS DIRECTED BY THE OWNER OF THE CABLE, AND SHALL BE AT THE CONTRACTOR'S EXPENSE. IF FAA CABLES ARE DAMAGED, REPAIRS SHALL BE DONE FROM POINT TO POINT IN ACCORDANCE WITH FAA REQUIREMENTS AND IN THE PRESENCE OF A FAA REPRESENTATIVE. THE OWNER MAY ELECT TO HAVE THE REPAIR PERRFORMED BY OTHERS IN WHICH CASE THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYING THE INCURRED COSTS OF REPAIRS.

23. COORDINATION MEETINGS -- THE CONTRACTOR SHALL CONDUCT WEEKLY COORDINATION MEETINGS TO DISCUSS WORK AREAS AND SCHEDULING, ETC. WITH THE ENGINEER, AIRPORT OPERATIONS, FAA, AND OTHER APPROPRIATE OFFICIALS. MINUTES FROM THE WEEKLY MEETINGS SHALL BE PREPARED BY THE CONTRACTOR, FURNISHED TO ALL ATTENDEES PRIOR TO THE SUBSEQUENT MEETING, AND KEPT ON FILE AT THE FIELD OFFICE. THE COORDINATION MEETING COSTS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

24. THE CONTRACTOR SHALL PROVIDE THE PHONE NUMBERS OF THREE PERSONNEL, INCLUDING THE PROJECT SUPERINTENDENT, WHO MAY BE CONTACTED IN AN EMERGENCY. PERSONNEL SHALL BE ON CALL 24 HOURS PER DAY FOR MAINTAINING AIRPORT HAZARD LIGHTING AND BARRICADES.

25. DRAINAGE MODIFICATIONS SHALL BE SEQUENCED TO PROVIDE POSITIVE DRAINAGE AT ALL TIMES AT NO ADDITIONAL COST TO THE CONTRACT. EXISTING LANSING DRAINAGE FLOWS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

26. VEHICLES AND EQUIPMENT SHALL NOT BE ALLOWED WITHIN 65' FROM ACTIVE TAXIWAYS AND 125' FROM ACTIVE RUNWAYS UNLESS OTHERWISE APPROVED BY THE AIRPORT MANAGER.

27. CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS IN SUCH A MANNER AS NOT TO VIOLATE FEDERAL AVIATION ADMINISTRATION PART 77 SURFACES OR RUNWAY AND TAXIWAY SAFETY AREAS.

28. ALL EXISTING TAXIWAY AND RUNWAY AIRFIELD LIGHTING CIRCUITS, FAA CABLES AND OTHER ELECTRICAL CABLES SHALL REMAIN IN SERVICE AT ALL TIMES. ALL EXISTING LIGHTING AND VAULT EQUIPMENT SHALL REMAIN IN SERVICE UNTIL PROPOSED IMPROVEMENTS ARE INSTALLED AND OPERATIONAL, UNLESS OTHERWISE APPROVED BY THE ENGINEER. ANY CABLES DAMAGED BY THE CONTRACTOR SHALL BE IMMEDIATELY REPAIRED AT HIS EXPENSE.

29. COORDINATION BY THE CONTRACTOR WITH THE EXISTING UTILITIES SHALL BE COMPLETED BEFORE CONSTRUCTION IS STARTED. CONTRACTOR IS REFERRED TO SECTION 50-17 OF THE SPECIAL PROVISIONS FOR SPECIFIC REQUIREMENTS. THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER OR THE DESIGN ENGINEER ASSUME ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED THAT THE LOCATIONS, SIZE AND TYPE MATERIAL OF EXISTING UNDERGROUND UTILITIES AS INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY OF HIS OPERATIONAL PLANS. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR DETAILED INFORMATION AND ASSISTANCE IN LOCATING UTILITIES. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY, THE RESIDENT ENGINEER AND THE AIRPORT DIRECTOR. ANY SUCH MAINS AND/OR SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT HIS EXPENSE TO THE SATISFACTION OF THE RESIDENT ENGINEER AND AIRPORT MANAGER.

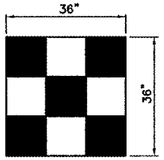
30. ALL AIRFIELD LIGHTING AND LIGHTING GUIDANCE SYSTEMS (NAVAIDS) LOCATED WITHIN AND IMMEDIATELY ADJACENT TO THE CONTRACTORS WORK ZONE SHALL BE CHECKED FOR OPERATIONAL CONDITION PRIOR TO THE DEPARTURE FROM THE AIRPORT WITH THE AIRPORT MAINTENANCE. ANY DEFECIENCIES IN THESE SYSTEMS DUE TO THE ACTS OF CONTRACTOR OR HIS SUBCONTRACTORS, SUPPLIERS OR CONSULTANTS SHALL BE REPAIRED IMMEDIATELY.

CONTRACTOR CROSSING RUNWAY AND TAXIWAY AIR OPERATIONS AREA (A.O.A.)

ANYTIME THE CONTRACTOR IS REQUIRED TO UTILIZE OR CROSS ACTIVE AIRFIELD PAVEMENTS FOR ACCESS TO AND FROM THE WORK ZONE, A FULL TIME CROSSING GUARD IN RADIO CONTACT WITH THE AIR TRAFFIC SHALL BE FURNISHED BY THE CONTRACTOR FOR MOVEMENTS OF VEHICLES OR EQUIPMENT TO AND FROM THE WORK ZONE. THE RADIO OPERATOR SHALL BE FAMILIAR WITH AIRPORT GROUND CONTROL PROCEDURES AND DEMONSTRATE KNOWLEDGE OF SAME TO THE AIRPORT. THE AIRPORT RESERVES THE RIGHT TO APPROVE THE CROSSING GUARDS. THE CONTRACTOR SHALL PROVIDE THEIR OWN RADIOS. THIS COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF MUNICIPAL FINES ($500 PER OCCURENCE) DUE TO AIRFIELD INCURSIONS BY HIS EMPLOYEES, SUBCONTRACTORS, SUPPLIERS, CONSULTANTS AND/OR AGENTS. .

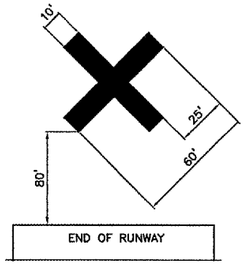
ANY PAVEMENT DAMAGED BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY HIM TO THE SATISFACTION OF THE RESIDENT ENGINEER AND AIRPORT MANAGER AT NO ADDITIONAL COST TO THE OWNER. PAVEMENT SHALL BE CONTINUALLY SWEPT TO PROVIDE DEBRIS FREE SURFACE DURING ALL HAUL ROAD OPERATIONS. THIS COST SHALL NOT BE PAID SEPERATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

WORK WITHIN THE A.O.A. SHALL BE EXPEDITED. ANY DROP OFF SHALL BE ADEQUATELY LIGHTED, SIGNED AND BARRICADED. NO MATERIAL SHALL BE STOCKPILED WITHIN THE A.O.A. SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO TEMPORARILY RELOCATE EQUIPMENT TO ALLOW AIRCRAFT TO PASS, THEY SHALL DO SO AT NO EXTRA COST TO THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND AIRPORT MANAGER TWO (2) WORKING DAYS IN ADVANCE OF ANY PLANNED CONSTRUCTION WITHIN THESE LIMITS.



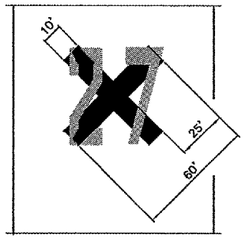
CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG

NOT TO SCALE



OFF PAVEMENT CLOSED RUNWAY MARKER DETAIL

NO SCALE



ON PAVEMENT CLOSED RUNWAY MARKER DETAIL

NO SCALE

CLOSED RUNWAY MARKER DETAIL NOTES

1. CLOSED RUNWAY MARKERS SHALL BE YELLOW.
2. MARKERS SHALL BE MATERIAL APPROVED BY THE ENGINEER.
3. CONTRACTOR SHALL MAINTAIN AND RELOCATE MARKERS AS SHOWN ON THE PLANS OR AS NEEDED TO FACILITATE CONSTRUCTION
4. MARKERS ON PAVEMENT SHALL BE PLACED OVER EXISTING RUNWAY NUMERALS AS SHOWN.
5. COST OF FURNISHING, INSTALLING, MAINTAINING AND REMOVING MARKERS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
6. DURING VARIOUS PHASES OF WORK, IT WILL BE NECESSARY TO CLOSE RUNWAYS TO AIR TRAFFIC ON A TEMPORARY BASIS AS COORDINATED WITH THE AIRPORT AND TOWER PERSONNEL. THE CONTRACTOR SHALL MARK THE RUNWAYS TO BE CLOSED BY PLACING A YELLOW CROSS AT THE LOCATION AND DIMENSIONS DETAILED ON THIS SHEET. THE CROSSES ARE SHOWN ON THE RESPECTIVE RUNWAYS ACCORDING TO THE VARIOUS PHASES OF WORK AS DELINEATED IN THE SUGGESTED SEQUENCE OF CONSTRUCTION.

LIMITATIONS ON CONSTRUCTION WITHIN AIRPORT OPERATIONS AREA (A.O.A.)

RUNWAYS:

ANY WORK WITHIN 125' OF THE CENTERLINE OF AN ACTIVE RUNWAY SHALL EITHER BE DONE ON WEEKENDS, OFF-PEAK DAYTIME OR NIGHTIME HOURS, LOCAL TIME AS SHOWN ON THE SEQUENCE OF CONSTRUCTION PLAN SHEETS. ON ANY DAY WHEN CONSTRUCTION IS WITHIN 125' OF THE CENTERLINE OF THE RUNWAY, THE RUNWAY SHALL BE CLOSED. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND AIRPORT MANAGER TWO (2) WORKING DAYS IN ADVANCE OF ANY PLANNED CONSTRUCTION WITHIN THESE LIMITS.

STEEL PLATES IF NECCESSARY SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR TO COVER ANY OPEN TRENCHES OR EXCAVATION WITHIN THE A.O.A. IF DURING RUNWAY CLOSURE AN EMERGENCY IS DECLARED, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE RUNWAY OF ALL VEHICLES, MEN AND EQUIPMENT.

TAXIWAYS / TAXILANES / APRONS:

CONSTRUCTION WILL BE ALLOWED UP TO THE EDGE OF PAVEMENTS WITHOUT CLOSURE ON A LIMITED BASIS. WORK WITHIN THE A.O.A. SHALL BE EXPEDITED. ANY DROP OFF SHALL BE ADEQUATELY LIGHTED, SIGNED AND BARRICADED. NO MATERIAL SHALL BE STOCKPILED WITHIN THE A.O.A. SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO TEMPORARILY RELOCATE EQUIPMENT TO ALLOW AIRCRAFT TO PASS, THEY SHALL DO SO AT NO EXTRA COST TO THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND AIRPORT MANAGER TWO (2) WORKING DAYS IN ADVANCE OF ANY PLANNED CONSTRUCTION WITHIN THESE LIMITS.

NOTE - ALL PHASES
ALL EXISTING TAXIWAY AND RUNWAY AIRFIELD LIGHTING CIRCUITS, FAA CABLES AND OTHER AIRPORT ELECTRICAL CABLES SHALL REMAIN IN SERVICE UNTIL REPLACED AS ACCEPTABLE TO THE RESIDENT ENGINEER. ALL TEMPORARY CABLING AND SPLICING NECESSARY TO KEEP THE CIRCUITS IN OPERATION SHALL BE CONSIDERED INCIDENTAL TO CONTRACT.

DESIGN AIRCRAFT APPROACH CATEGORY: B
DESIGN AIRPORT GROUP: II

MAXIMUM ANTICIPATED HEIGHT OF CONSTRUCTION EQUIPMENT: 20'

POINT "A"
NEAREST POINT ON CONSTRUCTION SITE TO ACTIVE RUNWAY 9/27
LATITUDE: 41°32'23.21"N (NAD 83)
LONGITUDE: 87°31'52.28"W (NAD 83)
EXISTING ELEVATION: 814.11

POINT "B"
NEAREST POINT ON CONSTRUCTION SITE TO ACTIVE RUNWAY 18/36 OFFSET FROM CENTERLINE EXTENDED
LATITUDE: 41°32'21.27"N (NAD 83)
LONGITUDE: 87°31'47.68"W (NAD 83)
EXISTING ELEVATION: 814.00

POINT "C"
NEAREST POINT ON CONSTRUCTION SITE TO ACTIVE RUNWAY 18/36 OFFSET FROM CENTERLINE EXTENDED
LATITUDE: 41°32'27.25"N (NAD 83)
LONGITUDE: 87°31'39.54"W (NAD 83)
EXISTING ELEVATION: 813.80

CONTRACTOR SHALL PLAN AND PERFORM HIS WORK SO AS NOT TO INTERFERE OR HINDER THE PROGRESS, WORK OR HAUL ROAD ACCESS OF OTHER CONTRACTORS (SEE SPECIAL PROVISIONS SECTION 30-05). THE PRIME CONTRACTOR WILL BE RESPONSIBLE TO COORDINATE CONSTRUCTION ACTIVITIES AND ACCESS BETWEEN ALL ON-SITE CONTRACTORS SUBCONTRACTORS. IT IS NOT ANTICIPATED THE FOLLOWING PROJECTS MAY BE UNDER CONSTRUCTION CONCURRENTLY WITH THIS PROJECT.

- HANGAR CONSTRUCTION AT MAIN APRON.
- HANGAR CONSTRUCTION AT NORTH QUADRANT SITEWORK.
- RUNWAY 36 LOCATOR INSTALLATION.

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UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Fri 3/26/04 2:50pm

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

SEQUENCE OF CONSTRUCTION
GENERAL NOTES AND DETAILS

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SUGGESTED SEQUENCE OF CONSTRUCTION

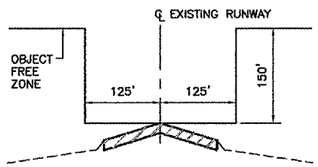
PHASE 1 - NORTH QUADRANT SITEWORK

- PLACE BARRICADES AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- MARK AIR OPERATIONS AREA (A.O.A.) WITH LATHE AND RIBBON AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- INSTALL SILT FENCE.
- CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE.
- CONSTRUCT TEMPORARY DITCH CROSSING.
- STRIP TOPSOIL AND PLACE EMBANKMENT FILL.
- PLACE STORM SEWER AND UNDERGROUND UTILITIES.

PHASE 2 - NORTH QUADRANT SITEWORK/TAXIWAY G2

- COORDINATE CLOSURE OF RUNWAY 9/27 AND TAXIWAY A WITH ENGINEER. PLACE CLOSED RUNWAY MARKERS AND BARRICADES AS SHOWN OR AS DIRECTED BY THE ENGINEER.
- STRIP TOPSOIL AND PLACE EMBANKMENT FILL FOR TAXIWAY G2.
- PLACE STORM SEWER AND UNDERGROUND UTILITIES INCLUDING ELECTRICAL CABLING FOR TAXIWAY G2.
- PLACE STONE BASE/BITUMINOUS BASE COURSE/BITUMINOUS SURFACE COURSE FOR TAXIWAY G2.
- PLACE LIGHTING, PAVEMENT MARKING AND TOPSOILING FOR TAXIWAY G2.
- PLACE SEEDING AND MULCHING FOR TAXIWAY G2.
- CLEAN PAVEMENTS AND REMOVE BARRICADES FOR TAXIWAY G2.
- OPEN RUNWAY 9/27, TAXIWAY A AND TAXIWAY G2.
- PLACE STONE BASE/BITUMINOUS BASE COURSE/BITUMINOUS SURFACE COURSE FOR NORTH QUADRANT SITEWORK.
- PLACE LIGHTING, PAVEMENT MARKING AND TOPSOILING FOR NORTH QUADRANT SITEWORK.
- PLACE SEEDING AND MULCHING.
- CLEAN PAVEMENTS AND REMOVE BARRICADES.
- OPEN PAVEMENTS.

WORK AREA	ALLOWABLE WORK PERIODS	OPERATIONAL STATUS/RESTRICTIONS
WORK WITHIN TAXIWAY/ APRON AIR OPERATIONS AREA (PHASE 1 AND 2)	NO RESTRICTIONS – WORK SHALL BE EXPEDITED TO SATISFACTION OF AIRPORT MANAGER	RUNWAY 9/27 OPEN – IN PHASE 1 TEMPORARY CLOSURES OF TAXIWAYS/ APRONS TO BE APPROVED BY AIRPORT MANAGER
WORK WITHIN RUNWAY 9/27 AND TAXIWAY A AND G3 AIR OPERATIONS AREA (PHASE 2)	WORK SHALL BE EXPEDITED TO SATISFACTION OF AIRPORT MANAGER	RUNWAY 9/27 – CLOSED TAXIWAY A – CLOSED TAXIWAY C,G2,G3 – OPEN
WORK OUTSIDE ALL AIR OPERATIONS AREA (PHASE 1 AND 2)	NO RESTRICTIONS	RUNWAY AND TAXIWAY OPEN
GLENWOOD–LANSING ROAD INTERSECTION IMPROVEMENTS (PHASE 2)	WORK SHALL BE COMPLETED WITHIN 30 CALENDAR DAYS AFTER WORK BEGINS (SEE NOTE 6)	GLENWOOD–LANSING ROAD RESTRICTIONS AS REQUIRED BY COOK COUNTY



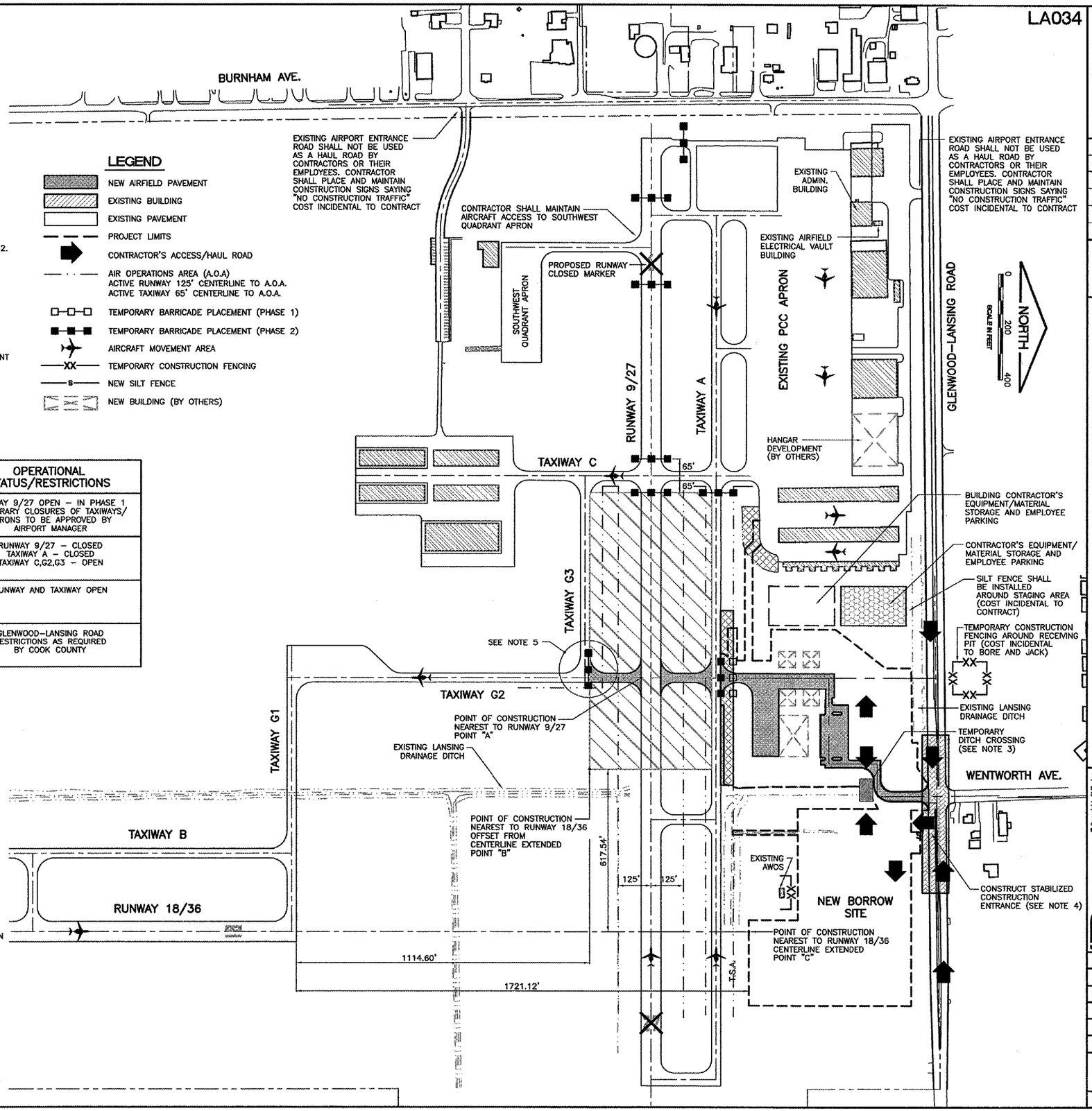
TYPICAL SECTION
OBSTACLE FREE ZONE (OFZ)

NOT TO SCALE

CONTRACTOR SHALL NOT WORK WITHIN THE RUNWAY OBJECT FREE ZONE WHILE THE RUNWAY IS OPEN TO AIR TRAFFIC.

NOTES

1. CONTRACTOR SHALL STAGE HIS OPERATIONS SO THAT THE EMBANKMENT FILL FOR THE PROPOSED HANGAR PADS IS COMPLETED BEFORE THE REMAINING PORTIONS OF EMBANKMENT FILL OUTSIDE OF THESE AREAS.
2. CONTRACTOR SHALL COORDINATE HIS WORK WITH THE BUILDING CONTRACTOR FOR THE INSTALLATION OF THE PROPOSED HANGAR FOUNDATION AND FLOOR PLACEMENT (BY OTHERS) AT NO ADDITIONAL COST TO THE CONTRACT.
3. IF REQUIRED CONTRACTOR SHALL OBTAIN NECESSARY PERMITS TO CONSTRUCT TEMPORARY DITCH CROSSING. CONTRACTOR SHALL COORDINATE WITH ILLINOIS DEPERTMENT OF TRANSPORTATION, OFFICE OF WATER RESOURCES. TEMPORARY DITCH CROSSING SHALL COMPLY WITH ALL REQUIREMENTS SET FORTH BY THE NATURAL RESOURCES CONSERVATION SERVICES, ILLINOIS URBAN MANUAL, TEMPORARY STREAM CROSSING. (COST SHALL BE INCIDENTAL TO THE CONTRACT).
4. CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AS SHOWN IN THE STORM WATER POLLUTION PREVENTION PLAN DETAILS. (COST SHALL BE INCIDENTAL TO CONTRACT).
5. CONTRACTOR SHALL HAVE DEDICATED FLAGGER ONSITE WHEN WORKING WITHIN TAXIWAY G3 A.O.A. AND YIELD TO ALL ONCOMING AIRCRAFT (COST SHALL BE INCIDENTAL TO CONTRACT).
6. CONTRACTOR SHALL OBTAIN ALL PERMITS FROM COOK COUNTY DEPARTMENT OF HIGHWAYS FOR ALL WORK WITHIN THE COUNTY'S RIGHT–OF–WAY (COST SHALL BE INCIDENTAL TO CONTRACT).



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XREF DWG:
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DATE: Wed 5/5/04 2:26pm

REVISIONS

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THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

SEQUENCE OF CONSTRUCTION
PER AC 150/5370-2E (LATEST EDITION)

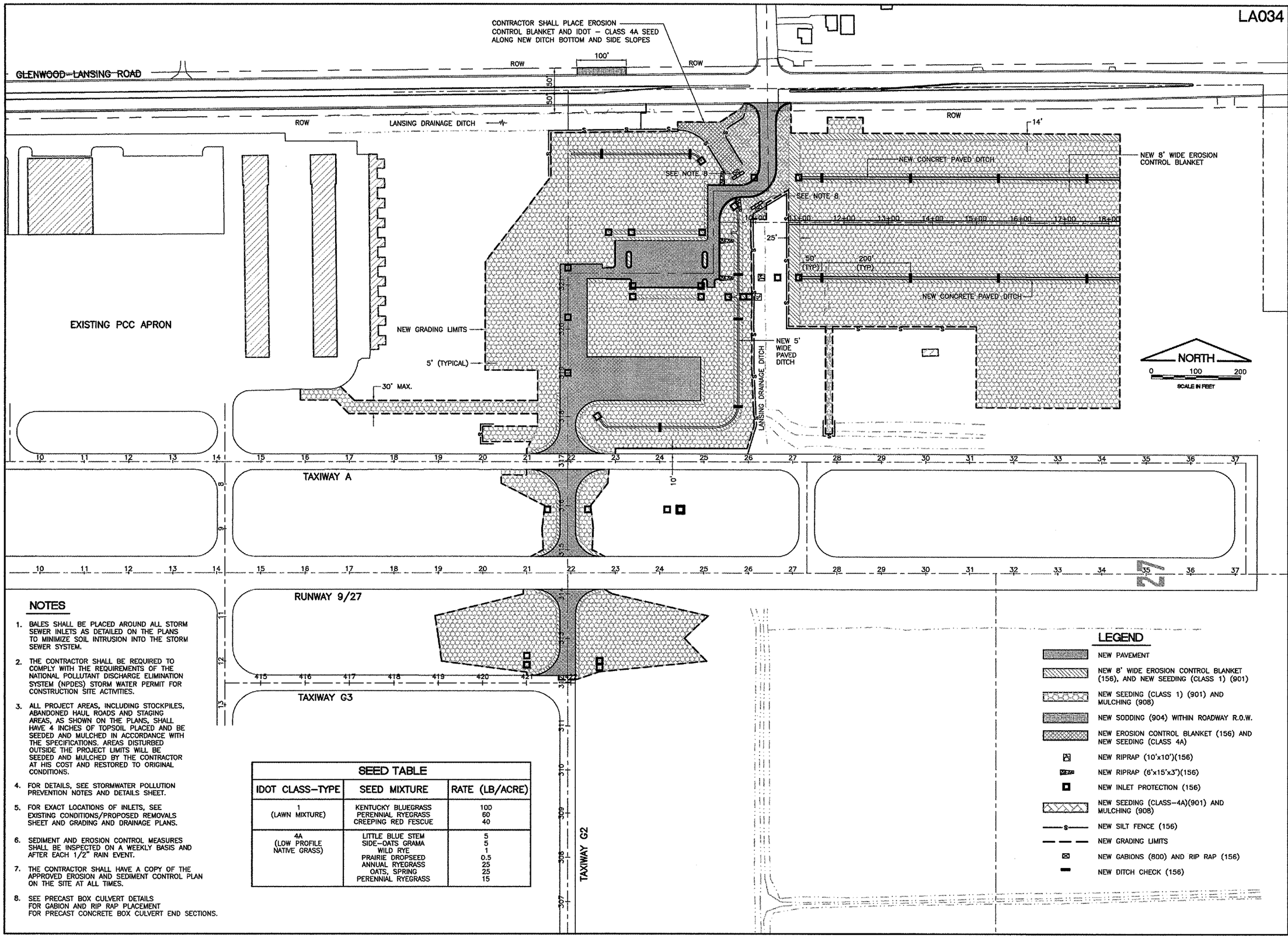
CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297–02

IL PROJECT: IGQ–3329
A.I.P. PROJECT: 3–17–0121–B21

SHEET 5 OF 50 SHEETS



NOTES

1. BALES SHALL BE PLACED AROUND ALL STORM SEWER INLETS AS DETAILED ON THE PLANS TO MINIMIZE SOIL INTRUSION INTO THE STORM SEWER SYSTEM.
2. THE CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER PERMIT FOR CONSTRUCTION SITE ACTIVITIES.
3. ALL PROJECT AREAS, INCLUDING STOCKPILES, ABANDONED HAUL ROADS AND STAGING AREAS, AS SHOWN ON THE PLANS, SHALL HAVE 4 INCHES OF TOPSOIL PLACED AND BE SEEDED AND MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS. AREAS DISTURBED OUTSIDE THE PROJECT LIMITS WILL BE SEEDED AND MULCHED BY THE CONTRACTOR AT HIS COST AND RESTORED TO ORIGINAL CONDITIONS.
4. FOR DETAILS, SEE STORMWATER POLLUTION PREVENTION NOTES AND DETAILS SHEET.
5. FOR EXACT LOCATIONS OF INLETS, SEE EXISTING CONDITIONS/PROPOSED REMOVALS SHEET AND GRADING AND DRAINAGE PLANS.
6. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH 1/2" RAIN EVENT.
7. THE CONTRACTOR SHALL HAVE A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN ON THE SITE AT ALL TIMES.
8. SEE PRECAST BOX CULVERT DETAILS FOR GABION AND RIP RAP PLACEMENT FOR PRECAST CONCRETE BOX CULVERT END SECTIONS.

SEED TABLE

IDOT CLASS–TYPE	SEED MIXTURE	RATE (LB/ACRE)
1 (LAWN MIXTURE)	KENTUCKY BLUEGRASS	100
	PERENNIAL RYEGRASS	60
	CREEPING RED FESCUE	40
4A (LOW PROFILE NATIVE GRASS)	LITTLE BLUE STEM	5
	SIDE–OATS GRAMA	5
	WILD RYE	1
	PRAIRIE DROPSEED	0.5
	ANNUAL RYEGRASS	25
	OATS, SPRING	25
	PERENNIAL RYEGRASS	15

LEGEND

- NEW PAVEMENT
- NEW 8' WIDE EROSION CONTROL BLANKET (156), AND NEW SEEDING (CLASS 1) (901)
- NEW SEEDING (CLASS 1) (901) AND MULCHING (908)
- NEW SODDING (904) WITHIN ROADWAY R.O.W.
- NEW EROSION CONTROL BLANKET (156) AND NEW SEEDING (CLASS 4A)
- NEW RIPRAP (10'x10')(156)
- NEW RIPRAP (6'x15'x3')(156)
- NEW INLET PROTECTION (156)
- NEW SEEDING (CLASS–4A)(901) AND MULCHING (908)
- NEW SILT FENCE (156)
- NEW GRADING LIMITS
- NEW GABIONS (800) AND RIP RAP (156)
- NEW DITCH CHECK (156)

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UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Mon 8/23/04 10:16am

REVISIONS

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LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

STORM WATER POLLUTION PREVENTION PLAN

CMT
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CONSULTING ENGINEERS
License No. 184-000618

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297–02

IL PROJECT: IGQ–3329
A.I.P. PROJECT: 3–17–0121–B21

SHEET 6 OF 50 SHEETS

STORM WATER POLLUTION PREVENTION PLAN

THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED IN THE PROJECT TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE WITH NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIMEFRAME SPECIFIED HEREIN AND AS DIRECTED BY THE ENGINEER, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING, WHICH WILL BE THE CONTRACTOR'S COST. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS, WHICH ARE NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN ON THE PLANS.

SITE DESCRIPTION

THE FOLLOWING IS A DESCRIPTION OF THE CONSTRUCTION ACTIVITY WHICH IS THE SUBJECT OF THIS PLAN:

THIS PROJECT CONSISTS OF CONSTRUCTING A NEW APRON TAXIWAY EXTENSION AT THE LANSING MUNICIPAL AIRPORT. THE PROJECT INCLUDES EXCAVATION, EMBANKMENT, DRAINAGE, VARIOUS PAVEMENT ITEMS, FENCING, ELECTRICAL IMPROVEMENTS AND OTHER MISCELLANEOUS CONSTRUCTION WORK.

THE FOLLOWING IS A DESCRIPTION OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE, SUCH AS EXCAVATION AND GRADING:

1. EXCAVATION AND EMBANKMENT WILL BE COMPLETED WITHIN THE PROJECT LIMITS TO GRADE OUT FOR THE PROPOSED DRAINAGE AND PAVEMENT IMPROVEMENTS.
2. UNDERDRAIN INSTALLATION AND MANHOLE ADJUSTMENTS.
3. PLACEMENT, MAINTENANCE, REMOVAL AND PROPER CLEAN-UP OF TEMPORARY EROSION CONTROL, SUCH AS PERIMETER SILT FENCE AND INLET PROTECTION.
4. PAVEMENT CONSTRUCTION.
5. FENCING AND ELECTRICAL IMPROVEMENTS.
6. FINAL GRADING AND OTHER MISCELLANEOUS ITEMS.
7. PLACEMENT OF PERMANENT EROSION CONTROL, SUCH AS SEEDING AND MULCHING.

AREA OF CONSTRUCTION SITE

THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 22.3 ACRES OF WHICH 22.3 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING AND OTHER ACTIVITIES.

OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

1. INFORMATION OF THE SOILS AND TERRAIN WITHIN THE SITE WAS OBTAINED FROM TOPOGRAPHIC SURVEYS AND SOIL BORINGS THAT WERE UTILIZED FOR THE DEVELOPMENT OF THE PROPOSED TEMPORARY EROSION CONTROL SYSTEMS.
2. PROJECT PLAN DOCUMENTS, SPECIFICATION AND SPECIAL PROVISIONS, AND PLAN DRAWINGS INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER GRADING ACTIVITIES WERE UTILIZED FOR THE PROPOSED PLACEMENT OF THE TEMPORARY EROSION CONTROL SYSTEMS.

DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:

THE CONSTRUCTION SITE DRAINS INTO THE LANSING DRAINAGE DITCH THROUGH A STORM SEWER SYSTEM.

SEDIMENTATION AND EROSION CONTROL NOTES

THE WILL/SOUTH COOK SOIL AND WATER CONSERVATION DISTRICT (SWCD) IS RESPONSIBLE FOR CONDUCTING SITE VISITS AND VERIFYING THAT THE PRACTICES ARE WORKING PROPERLY AND DETERMINE IF ADDITIONAL PRACTICES ARE NEEDED FOR BETTER SOIL EROSION AND SEDIMENT CONTROL. IF ADDITIONAL PRACTICES ARE DEEMED NECESSARY BY THE SWCD THE CONTRACTOR WILL IMPLEMENT THE PRACTICES IN A TIMELY MANNER. THE ADDITIONAL PRACTICES (IF REQUIRED) SHALL BE COORDINATED WITH THE RESIDENT ENGINEER BEFORE WORK BEGINS.

THE WILL/SOUTH COOK SOIL AND WATER CONSERVATION DISTRICT MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES, AND ONE WEEK PRIOR TO FINAL INSPECTION.

THE SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSPECTED WEEKLY AND AFTER 1/2 INCH OF RAIN OR MORE BY THE RESIDENT ENGINEER.

ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE REFERENCED FROM THE ILLINOIS URBAN MANUAL.

THE DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE SEEDING AND MULCHING AS DIRECTED BY THE ENGINEER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.

AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, INLET PROTECTION AND PERIMETER SILT FENCE SHALL BE INSTALLED AS CALLED OUT IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

THIS PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF THE NPDES PERMIT NUMBER ILR10, ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITE ACTIVITIES.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:

DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING (EXCEPT AS DESCRIBED ON THE PLANS AND DIRECTED BY THE ENGINEER), PARKING OF VEHICLES OR CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS, OR OTHER CONSTRUCTION RELATED ACTIVITIES.

1. WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
2. EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED, AT THE CONTRACTORS EXPENSE, IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
3. AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:
   A. PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
   B. CONSTRUCT DITCHES AND PROVIDE TEMPORARY EROSION CONTROL SYSTEMS.
   C. BUILD NECESSARY EMBANKMENT AT CULVERT/STORM SEWER LOCATIONS AND THEN EXCAVATE AND PLACE PIPE.
   D. EXCAVATED AREAS AND EMBANKMENT AREAS SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED, AT THE CONTRACTOR'S COST, IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN DAYS.
4. CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
5. SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR UNCLASSIFIED EXCAVATION AND EROSION CONTROL ITEMS.
6. THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED AS DIRECTED BY THE ENGINEER AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING. THE COST OF THIS REMOVAL SHALL BE INCLUDED IN THE UNIT BID PRICE FOR VARIOUS TEMPORARY EROSION CONTROL PAY ITEMS.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING:

TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS ARE SEEDED AND ESTABLISHED.

ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP, AND DISTURBED TURF RESEEDED.

MAINTENANCE AFTER CONSTRUCTION

CONSTRUCTION IS COMPLETE AFTER FINAL ACCEPTANCE BY THE ILLINOIS DIVISION OF AERONAUTICS. MAINTENANCE UP TO THIS DATE WILL BE REQUIRED BY THE CONTRACTOR.

CONTRACTORS

1. THE STORM WATER POLLUTION PREVENTION PLAN MUST CLEARLY IDENTIFY FOR EACH MEASURE IDENTIFIED IN THE PLAN, THE CONTRACTOR(S) OR SUBCONTRACTOR(S) THAT WILL IMPLEMENT THE MEASURE. ALL CONTRACTORS AND SUBCONTRACTORS IDENTIFIED IN THE PLAN MUST SIGN A COPY OF THE CERTIFICATION STATEMENT IN PARAGRAPH 2 BELOW IN ACCORDANCE WITH PART VI.G (SIGNATORY REQUIREMENTS) OF THIS PERMIT. ALL CERTIFICATIONS MUST BE INCLUDED IN THE STORM WATER POLLUTION PREVENTION PLAN EXCEPT FOR OWNERS THAT ARE ACTING AS CONTRACTOR.
2. CERTIFICATION STATEMENT. ALL CONTRACTORS AND SUBCONTRACTORS IDENTIFIED IN A STORM WATER POLLUTION PREVENTION PLAN IN ACCORDANCE WITH PARAGRAPH 1 ABOVE SHALL SIGN A COPY OF THE FOLLOWING CERTIFICATION STATEMENT BEFORE CONDUCTING ANY PROFESSIONAL SERVICE AT THE SITE IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN:

   "I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (1LR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION."

   THE CERTIFICATION MUST INCLUDE THE NAME AND TITLE OF THE PERSON PROVIDING THE SIGNATURE IN ACCORDANCE WITH PART VI.G OF THIS PERMIT: THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE CONTRACTING FIRM; THE ADDRESS (OR OTHER IDENTIFYING DESCRIPTION) OF THE SITE: AND THE DATE THE CERTIFICATION IS MADE.

CONTRACTOR CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (1LR10) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION."

GENERAL CONTRACTOR

SIGNATURE _____ TITLE _____ DATE _____

COMPANY _____

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF INTENT (NOI)

GENERAL PERMIT TO DISCHARGE STORM SEWER CONSTRUCTION SITE ACTIVITIES

IMPORTANT: FORM MUST BE TYPED TO ENABLE AUTOMATED OPTICAL PROCESSING.
SUBMIT ORIGINAL - DO NOT SUBMIT PHOTOCOPY

OWNER INFORMATION

	LAST	FIRST	MI (SEE INSTRUCTIONS)	OWNER TYPE(SELECT ONE AND TYPE "X")
NAME:	VILLAGE OF LANSING ILLINOIS			☐ PRIVATE ☐ COUNTY ☐ STATE
MAILING ADDRESS:	18200 CHICAGO AVE.			☒ CITY ☐ SPECIAL DISTRICT
CITY:	LANSING	ST. IL	ZIP: 60438	☐ FEDERAL
CONTACT PERSON:	ROBERT MALKAS			TELEPHONE NUMBERS: AREA CODE 708 NUMBER 895-8844

CONTRACTOR INFORMATION

	LAST	FIRST	MI (SEE INSTRUCTIONS)	TELEPHONE NUMBERS: AREA CODE NUMBER
NAME:				
MAILING ADDRESS:		CITY	ST. ZIP:	

CONSTRUCTION SITE INFORMATION

SELECT ONER AND TYPE "X"	☐ EXISTING SITE	☒ NEW SITE	☐ CHANGE OF INFORMATION	GENERAL NPDES PERMIT NO.	
FACILITY NAME	LANSING MUNICIPAL AIRPORT			Other NPDES Permit Numbers (If Applicable)	N/A
MAILING ADDRESS:	18200 CHICAGO AVE.			TELEPHONE NUMBERS:	AREA CODE 708 NUMBER 895-8844
CITY:	LANSING	ST. IL	ZIP: 60438	LATITUDE: DEGREES TO SECONDS	DEG. MIN. SEC.
COUNTY:	COOK	SECTION: 8		TOWNSHIP: 36 NORTH	RANGE: 15 EAST
START CONSTRUCTION DATE:	MM/DD/YY	END CONSTRUCTION DATE:	MM/DD/YY	TOTAL SIZE OF CONSTRUCTION SITE IN ACRES:	22 ACRES

TYPE OF CONSTRUCTION

☐ RESIDENTIAL ☐ COMMERCIAL ☐ INDUSTRIAL ☐ RECONSTRUCTION ☒ TRANSPORTATION ☐ OTHER

HISTORIC PRESERVATION AND ENDANGERED SPECIES COMPLIANCE (OPTIONAL)

HAS THIS PROJECT SATISFIED APPLICABLE REQUIREMENTS FOR COMPLIANCE WITH ILLINOIS LAW ON:

HISTORIC PRESERVATION ☒ YES ☐ NO, AND

ENDANGERED SPECIES ☒ YES ☐ NO,

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment." In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with.

OWNER SIGNATURE: _____ DATE: _____

MAIL COMPLETED FORM TO: (DO NOT SUBMIT ADDITIONAL DOCUMENTATION UNLESS REQUESTED)

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
ATTN: PERMIT SECTION
2200 CHURCHILL ROAD
POST OFFICE BOX 19276
SPRINGFIELD, IL 62794-9276

FOR OFFICE USE ONLY
LOG
PERMIT
DATE:

This Agency is authorized to require this information under Illinois Revised Statute, 1991, Chapter 111 1/2, section 1039. Information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

LA034

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LAYOUT: Layout1
UPDATE BY: johse
SURVEY BOOK #
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REVISIONS

NUMBER	BY	DATE

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THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

STORM WATER POLLUTION PREVENTION PLAN NOTES

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
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DATE:	03/04/05
JOB No:	03297-02

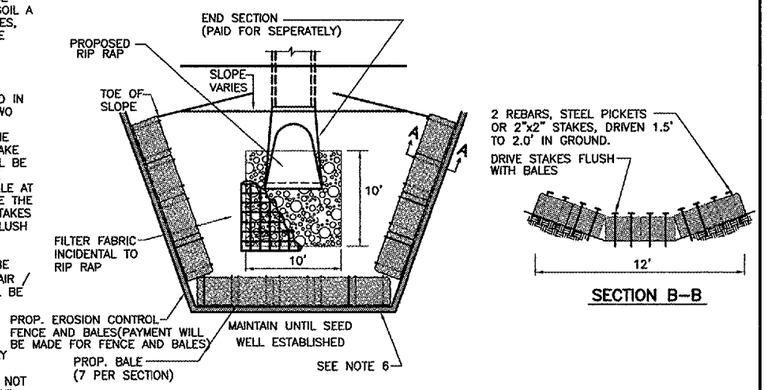
IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SHEET 7 OF 50 SHEETS

NOTES

1. BALES SHALL BE PLACED AT THE TOE OF SLOPE OR ON A CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR REBARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR / REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. COST OF REMOVAL / REPLACEMENT TO BE INCLUDED IN UNIT PRICE FOR BALES.
6. AFTER FINAL APPROVAL OF THE ENGINEER, STRAW BALES MAY BE REMOVED. CONTRACTOR SHALL PLACE SEED AND MULCH OVER THE DISTURBED AREAS. COST INCIDENTAL TO INLET PROTECTION.

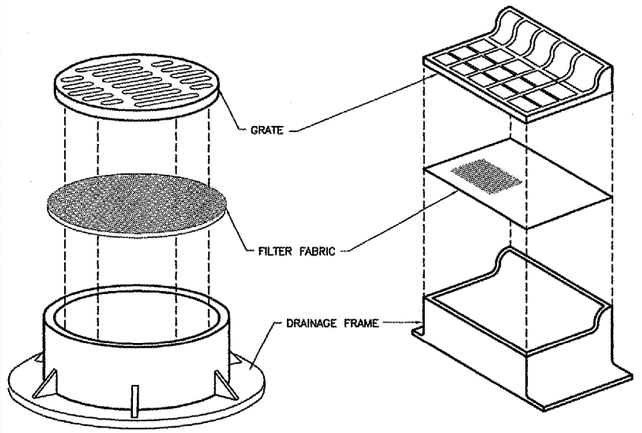
SEE NRCS STANDARD DRAWING NO. IL-508 SF FOR ADDITIONAL INSTALLATION DETAILS AND NOTES USED FOR TEMPORARY EROSION CONTROL. DETAIL BELOW SHALL BE USED AFTER RIP RAP IS PLACED



SECTION B-B

INLET/OUTLET PROTECTION (END SECTION)

N.T.S.

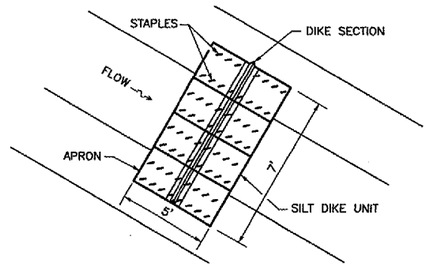


NOTES

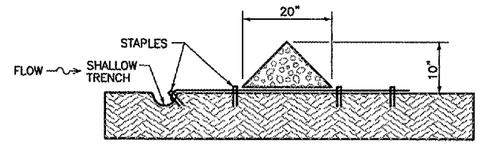
1. FILTER WRAP TO BE PLACED IN ALL EXISTING/PROPOSED INLETS, MANHOLES, TRENCH DRAINS AND CATCH BASINS LOCATED IN PAVED AREAS AND NONPAVED AREAS.
2. FABRIC SHALL BE IN CONFORMANCE WITH MATERIALS SPECIFIED FOR SILT FENCE.
3. FABRIC SHALL OVERLAY FRAME BY 2" (MIN.).
4. CONTRACTOR SHALL CLEAR DEBRIS AND SILT AS REQUIRED FROM FABRIC TO MAINTAIN DRAINAGE THROUGH THE STRUCTURE.
5. FABRIC SHALL REMAIN IN PLACE UNTIL TURFED AREAS HAVE DEVELOPED A MIN. OF 80% OF COVERAGE.
6. COST OF FILTER WRAP SHALL BE CONSIDERED INCIDENTAL TO BALES.

DRAINAGE STRUCTURE FILTER WRAP

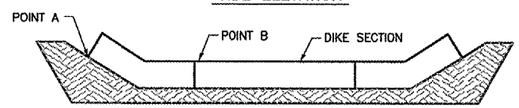
N.T.S.



PLAN



SIDE ELEVATION



POINT A MUST BE HIGHER THAN POINT B TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

FRONT ELEVATION

URETHANE FOAM/GEOTEXTILE DITCH CHECK

NOT TO SCALE
FROM IDOT STANDARD 280001-02

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FILE: erosnotes2.dwg
LAYOUT: Layout1
UPDATE BY: johse
SURVEY BOOK #
DATE: Wed 3/9/05 8:26am
XREF DWG: tbclnt.dwg
tb.dwg

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

STORM WATER POLLUTION PREVENTION PLAN DETAILS

SEE NRCS STANDARD DRAWING NO. IL-620 SILT FENCE PLAN FOR INSTALLATION DETAIL AND ADDITIONAL NOTES

CONSTRUCTION NOTES FOR SILT FENCE

1. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" MIN. AND FOLDED.
2. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE. MAINTENANCE, WHICH INCLUDES THE REPLACEMENT OF DAMAGED FENCE, SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE EROSION CONTROL FENCE.
3. SILT FENCE SHALL BE INSTALLED PER STORM WATER POLLUTION PREVENTION PLAN OR AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FABRIC FENCE DETAIL

N.T.S.

SEE NRCS STANDARD DRAWING NO. IL-530 EROSION BLANKET PLAN FOR INSTALLATION DETAIL AND NOTES

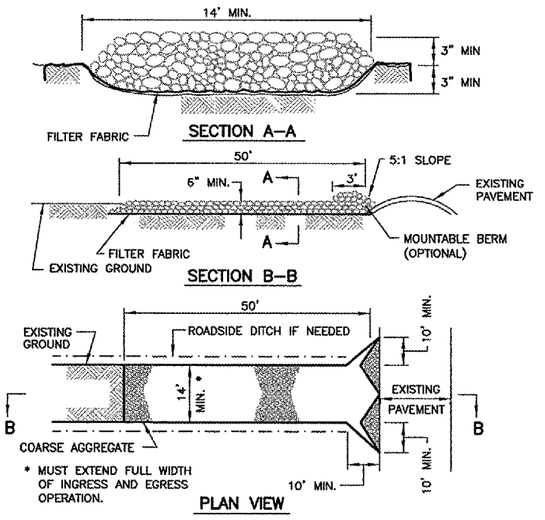
SEE NRCS STANDARD DRAWING NO. IL-563 INLET PROTECTION STRAW BALE BARRIER PLAN FOR INSTALLATION DETAIL AND ADDITIONAL NOTES

NOTES

1. BALES SHALL BE PLACED AT THE TOE OF SLOPE OR ON A CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR REBARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR / REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. COST OF REMOVAL / REPLACEMENT TO BE INCLUDED IN UNIT PRICE FOR BALES.
6. AFTER FINAL APPROVAL OF THE ENGINEER, STRAW BALES MAY BE REMOVED. CONTRACTOR SHALL PLACE TOPSOIL, SEED AND MULCH OVER THE DISTURBED AREAS, COST INCIDENTAL TO BALES.

INLET PROTECTION - TURF AREAS

N.T.S.



1. FILTER FABRIC SHALL MEET THE REQUIREMENTS OF MATERIAL SPECIFIED FOR AR152540 IN THE ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS SUPPLEMENTAL SPECIFICATIONS AND RECURING SPECIAL PROVISIONS.
2. ROCK OR RECLAIMED CONCRETE SHALL MEET ONE OF THE FOLLOWING IDOT COARSE AGGREGATE GRADATION, CA-1, CA-2, CA-3 OR CA-4.
3. ANY DRAINAGE FACILITIES REQUIRED BECAUSE OF WASHING SHALL BE CONSTRUCTED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND SHALL BE INCIDENTAL TO THE CONTRACT.
4. MINIMUM WIDTH IS 14' FOR ONE-WAY TRAFFIC AND 20' FOR TWO WAY TRAFFIC. TWO-WAY TRAFFIC WIDTHS SHALL BE INCREASED A MINIMUM OF 4' FOR TRAILER TRAFFIC. DEPENDING ON THE TYPE OF VEHICLE OR EQUIPMENT, SPEED, LOADS, CLIMATIC AND OTHER CONDITIONS UNDER WHICH VEHICLES AND EQUIPMENT OPERATE AN INCREASE IN THE MINIMUM WIDTHS MAY BE REQUIRED.
5. ROADWAY SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE EXTENT POSSIBLE.
6. STABILIZED CONSTRUCTION ENTRANCE SHALL BE INCIDENTAL TO THE CONTRACT.

STABILIZED CONSTRUCTION ENTRANCE

FROM NRCS STANDARD DRAWING NO. IL-630

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JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

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UPDATE BY: jpeto
SURVEY BOOK #
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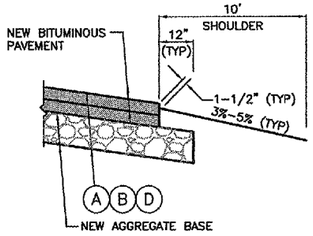
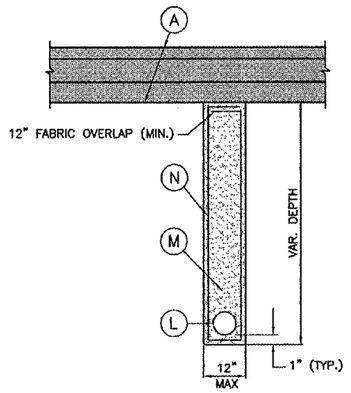


AIRFIELD PAVEMENT EDGE DETAIL
NO SCALE



UNDERDRAIN DETAIL - PAVED AREAS
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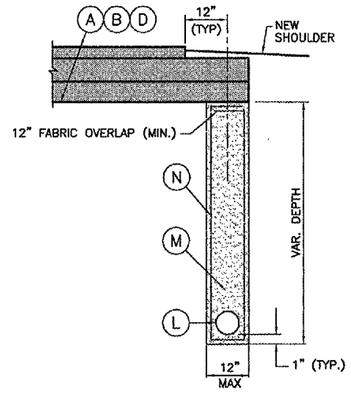


UNDERDRAIN DETAIL - EDGE OF PAVEMENT AREAS
NO SCALE

LEGEND

(A) NEW HANGAR/TAXILANE PAVEMENT STRUCTURE (STATE/LOCAL FUNDING)
1.5" BITUMINOUS SURFACE COURSE (401)
2.5" BITUMINOUS BASE COURSE (201)
7" CRUSHED AGGREGATE BASE COURSE (209)
4" AGGREGATE BASE COURSE (208)

(B) NEW HANGAR APRON PAVEMENT STRUCTURE (LOCAL ONLY FUNDING)
1.5" BITUMINOUS SURFACE COURSE (401)
2.5" BITUMINOUS BASE COURSE (201)
7" CRUSHED AGGREGATE BASE COURSE (209)
4" AGGREGATE BASE COURSE (208)

(C) NEW HANGAR FLOOR SLAB - BY OTHERS
5" P.C. CONCRETE PAVEMENT
4" AGGREGATE BASE COURSE

(D) NEW TAXIWAY G2 PAVEMENT STRUCTURE (FEDERAL/STATE/LOCAL FUNDING)
1.5" BITUMINOUS SURFACE COURSE (401)
2.5" BITUMINOUS BASE COURSE (201)
11" CRUSHED AGGREGATE BASE COURSE (209)

(E) NEW ACCESS DRIVE/AUTO PARKING LOT PAVEMENT STRUCTURE (STATE/LOCAL FUNDING)
1.5" BITUMINOUS SURFACE COURSE (401)
2.5" BITUMINOUS BASE COURSE (201)
8" CRUSHED AGGREGATE BASE COURSE (209)

(F) FUTURE HANGAR APRON PAVEMENT STRUCTURE (BY OTHERS)

(G) NEW TOPSOIL PLACEMENT (4" MIN.)(905)

(H) NEW EMBANKMENT FILL (152)

(I) NEW SEEDING AND MULCHING (901 AND 908)

(J) NEW TACK COAT (603)

(K) NEW PRIME COAT (602)

(L) NEW 6" C.P.P.U.P. W/ SOCK (705)

(M) NEW POROUS BACKFILL (705) COST INCIDENTAL TO PROPOSED UNDERDRAIN

(N) NEW UNDERDRAIN TRENCH FABRIC ENVELOPE (705) COST INCIDENTAL TO UNDERDRAIN

(O) NEW GROUNDLINE

(P) EXISTING GROUNDLINE

(Q) NEW 12" AVERAGE TOPSOIL STRIPPING (152)

(R) FUTURE GROUNDLINE

(S) NEW 6" AVERAGE TOPSOIL STRIPPING (152)

(T) NEW SHOULDER FILL (152)

(U) NEW COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (GUTTER THICKNESS SHALL BE 9" W/ 4" AGGREGATE BASE)

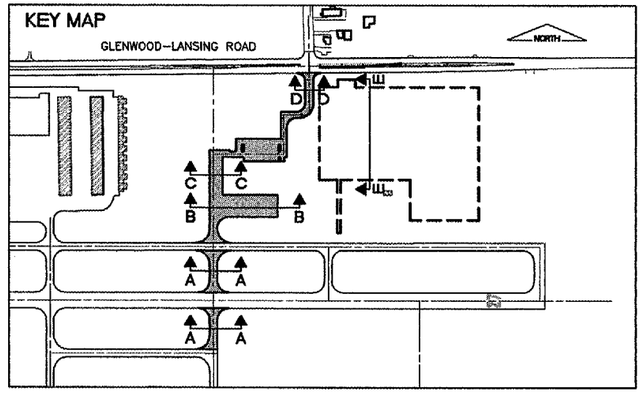
(V) NEW SOIL STABILIZATION FABRIC (152)

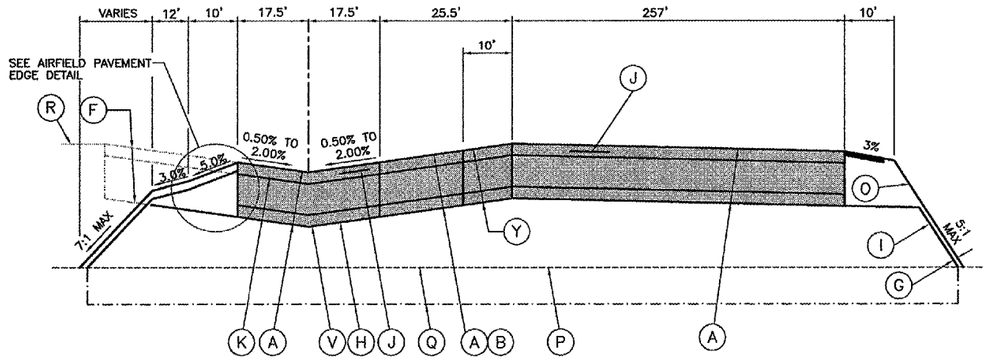
(W) NEW 8' WIDE EROSION CONTROL BLANKET (156)

(X) NEW 24" THICK POROUS GRANULAR EMBANKMENT (208) UNDER PAVEMENT WITHIN EXISTING LANSING DRAINAGE DITCH

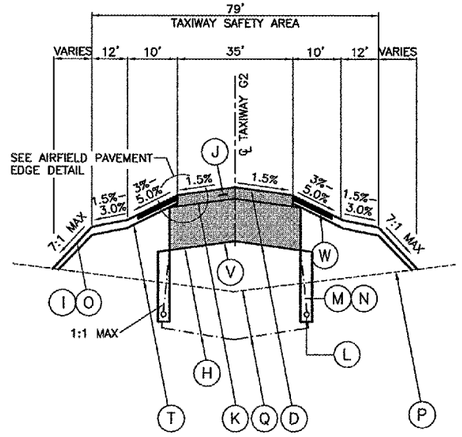
(Y) CONTRACTOR SHALL PAVE 10' WIDTH AFTER BUILDING CONTRACTOR'S COMPLETION OF NEW BUILDING FOUNDATION. TIMING/SCHEDULING/COORDINATING THIS WORK SHALL BE AT NO ADDITIONAL COST TO CONTRACT.

(Z) NEW UNCLASSIFIED EXCAVATION (152)

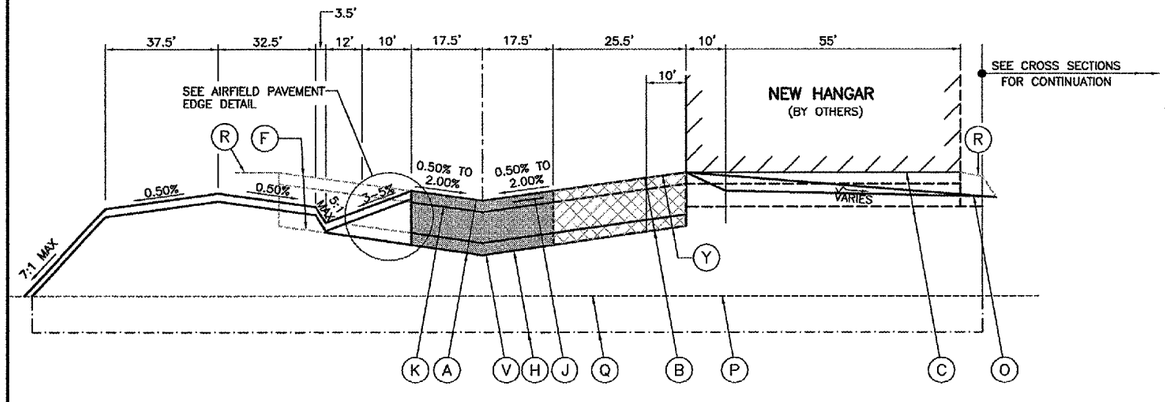




HANGAR SITE TYPICAL SECTION B-B
NO SCALE



TAXIWAY G2 EXTENSION TYPICAL SECTION A-A
NO SCALE



HANGAR SITE TYPICAL SECTION C-C
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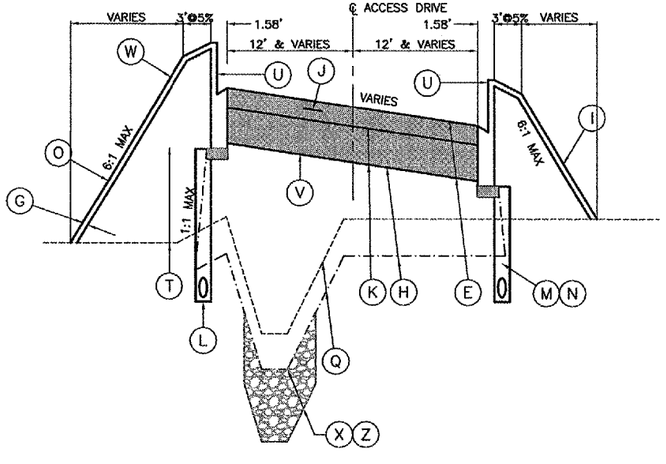
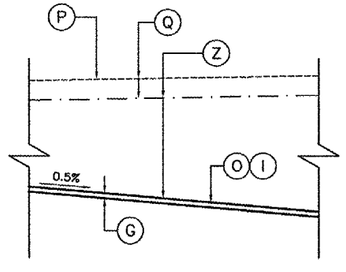


ROADWAY TYPICAL SECTION D-D
NO SCALE
NEW AUTO PARKING LOT PAVEMENT STRUCTURE SHALL BE SECTION D-D



BORROW SITE TYPICAL SECTION E-E
NO SCALE

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

TYPICAL SECTIONS

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A.I.P. PROJECT: 3-17-0121-B21

IMAGE FILES:

LA034

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LAYOUT: Layout1
UPDATE BY: johse
SURVEY BOOK #
DATE: Fri 3/18/05 2:19pm
XREF DWG: nethgr-base.dwg
tbclnt.dwg
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GLENWOOD-LANSING ROAD

LANSING DRAINAGE DITCH

EXISTING SIGN TO BE REMOVED

EXISTING 7'x4' BOX CULVERT

EXISTING SIGN TO BE RELOCATED

START FENCE RELOCATION
STA. 324+42.2, 32.5' LT.

EXISTING 322 LF OF 6' CLASS E
FENCE TO BE RELOCATED

EXISTING COMED METER TO BE RELOCATED (BY OTHERS)
AND RELOCATE EXISTING BOX AND METER HOUSING (SEE NOTES 7 AND 8)

EXISTING COMED METER TO BE RELOCATED BY OTHERS
AND EXISTING AWOS POWER PANEL TO BE RELOCATED (SEE NOTE 5)

EXISTING AIRPORT WARNING SIGN TO BE
RELOCATED AS DIRECTED BY THE ENGINEER

EXISTING WETLAND/WATERWAY
TO BE DISTURBED

EXISTING STEEL BEAM TO BE REMOVED
(COST INCIDENTAL TO ITEM 152)

EXISTING BLOCK RETAINING WALL TO BE REMOVED
(COST INCIDENTAL TO ITEM 152)(SEE NOTE 4)

NORTH
0 30 60
SCALE IN FEET

SEE BORROW SITE EXISTING CONDITIONS/PROPOSED REMOVALS SHEET FOR LEGEND AND NOTES

EXISTING ASPHALT AND
CONCRETE DEBRIS

EXISTING WETLAND
TO BE FILLED

EXISTING ASPHALT AND CONCRETE DEBRIS
(SEE NOTE 4)

LANSING DRAINAGE DITCH

MATCHLINE STA.319+00

REVISIONS

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LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

EXISTING CONDITIONS/PROPOSED REMOVALS
NORTH QUADRANT SITEWORK
AND AUTO PARKING LOT

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SHEET 10 OF 50 SHEETS

IMAGE FILES:

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UPDATE BY: johse
SURVEY BOOK #
DATE: Fri 3/11/05 10:31am
XREF DWG: tbcint.dwg
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EXISTING ROADWAY TRAFFIC SIGNAL (TYPICAL)
EXISTING AMERITECH LINES
EXISTING B-6.24 FLUSH GUTTER
EXISTING INLET TO BE ADJUSTED
EXISTING CURB INLET (TYPICAL)
EXISTING UTILITY POLE TO BE RELOCATED (BY OTHERS)
REMOVE 65 LF OF EXISTING B-6.24 COMBINATION CURB AND GUTTER FOR RELOCATED ACCESS POINT (EXACT LOCATION TO BE COORDINATED WITH AIRPORT MANAGER AND COOK COUNTY DEPARTMENT OF HIGHWAYS)
SEE NOTE
50'(TYP)
EXISTING 24 LF OF 6' CLASS E FENCE TO BE RELOCATED (EXACT LOCATION TO BE COORDINATED WITH AIRPORT MANAGER)
20'
EXISTING SIGN TO BE REMOVED
EXISTING INLET TO BE ADJUSTED
EXISTING 7'x4' BOX CULVERT
EXISTING WETLAND TO BE FILLED
EXISTING TREE AND DEBRIS TO BE REMOVED (COST INCIDENTAL TO ITEM 152)
EXISTING 6' CLASS E FENCE
EXISTING COMED METER AND AWOS POWER PANEL TO BE RELOCATED (SEE NOTE 5)
EXISTING BRUSH AND DEBRIS TO BE REMOVED COST INCIDENTAL TO ITEM 152
EXISTING 85 LF OF 6' CLASS E FENCE TO BE RELOCATED
EXISTING BLOCK RETAINING WALL TO BE REMOVED (COST INCIDENTAL TO ITEM 152) (SEE NOTE 4)
LANSING DRAINAGE DITCH
EXISTING WETLAND TO BE DISTURBED
EXISTING 40 LF OF 18" CMP TO BE REMOVED
NEW BORROW SITE LIMITS
EXISTING WETLAND TO BE FILLED
EXISTING FAA AWOS
EXISTING AWOS POWER CABLE TO REMAIN UNDISTURBED
10' MAX
TAXIWAY A

NORTH
0 50 100
SCALE IN FEET

NOTES

1. CONTRACTOR SHALL VERIFY EXISTING RUNWAY AND TAXIWAY LIGHTING ARE OPERATIONAL AT THE END OF EACH WORKING DAY.
2. ANY TEMPORARY CABLING REQUIRED FOR THIS PROJECT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
3. IN AREAS WHERE UNDERDRAIN OR STORM SEWER IS BEING REMOVED BELOW LIMITS OF NEW OR EXISTING PAVEMENTS, TRENCH SHALL BE BACKFILLED WITH COMPACTED CRUSHED AGGREGATE BACKFILL (208). COST OF BACKFILLING SHALL BE PAID FOR UNDER TRENCH BACKFILL (701).
4. ALL CONCRETE AND ASPHALT DEBRIS ENCOUNTERED DURING EXCAVATION MAY BE USED AS EMBANKMENT FILL. MATERIAL SHALL BE BROKEN IN 1'x1' PIECES OR SMALLER. LOCATION OF FILL SHALL BE AS APPROVED BY THE ENGINEER. COST IS INCIDENTAL TO ITEM 152.
5. CONTRACTOR SHALL COORDINATE ELECTRIC SERVICE RELOCATIONS WITH FAA-AIRWAY FACILITIES, UTILITY COMPANY, AIRPORT MANAGER AND, COOK COUNTY DEPARTMENT OF HIGHWAYS.
6. CONTRACTOR SHALL SAWCUT LIMITS OF ALL CONCRETE FLUMES, CURB AND CURB AND GUTTER TO BE REMOVED. COST SHALL BE INCIDENTAL TO ITEM REMOVAL.

LEGEND

- NEW PAVEMENT
- EXISTING WETLAND TO BE DISTURBED
- EXISTING CONCRETE FLUME
- EXISTING INLET/MANHOLE
- EXISTING FLARED END SECTION
- EXISTING SLOPE BOX
- EXISTING STORM SEWER AND SIZE
- EXISTING UNDERDRAIN COLLECTION STRUCTURE
- EXISTING FIRE HYDRANT
- EXISTING BASE MOUNTED MEDIUM INTENSITY TAXIWAY LIGHT
- EXISTING STAKE MOUNTED MEDIUM INTENSITY TAXIWAY LIGHT
- EXISTING STAKE MOUNTED MEDIUM INTENSITY RUNWAY LIGHT
- EXISTING BASE MOUNTED MEDIUM INTENSITY RUNWAY LIGHT
- EXISTING CONCRETE ENCASED DUCT BANK (NUMBER OF WAYS)
- EXISTING GRS CONDUIT
- EXISTING ELECTRICAL HANDHOLE
- EXISTING RUNWAY 9/27 CIRCUIT
- EXISTING TAXIWAY A CIRCUIT
- EXISTING RUNWAY 18/36 CIRCUIT
- EXISTING TAXIWAY B CIRCUIT
- EXISTING RUNWAY 18 PAPI CIRCUIT
- EXISTING RUNWAY 36 PAPI CIRCUIT
- EXISTING RUNWAY 27 PAPI CIRCUIT
- EXISTING UNDERGROUND COMED ELECTRIC LINE
- EXISTING OVERHEAD COMED ELECTRIC LINE
- EXISTING UTILITY POLE
- EXISTING TELEPHONE
- EXISTING 6' FENCE
- EXISTING RIGHT-OF-WAY
- EXISTING LANSING DRAINAGE DITCH
- EXISTING UNDERDRAIN
- EXISTING WATERMAIN
- EXISTING ITEM TO BE REMOVED OR ABANDONED
- EXISTING GUARDRAIL
- NEW PROJECT LIMITS

REVISIONS

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LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

EXISTING CONDITIONS/PROPOSED REMOVALS BORROW SITE

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IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

NOTES

1. SEE CROSS SECTION SHEET FOR THE REMAINING GRADES.
2. CONTRACTOR TO VERIFY EXISTING DRAINAGE DITCH INVERTS PRIOR TO PLACEMENT OF ALL DRAINAGE STRUCTURES.
3. CONTRACTOR SHALL COORDINATE WITH BUILDING CONTRACTOR ON ALL NEW PAVEMENT WITHIN 10' OF PROPOSED BUILDING LOCATIONS. CONTRACTOR SHALL PAVE 10' WIDTH AFTER BUILDING CONTRACTOR'S COMPLETION OF NEW BUILDING FOUNDATIONS. TIMING/SCHEDULING/COORDINATING THIS WORK SHALL BE AT NO ADDITIONAL COST TO CONTRACT.

CONTRACTOR SHALL REROUTE/FILL DRAINAGE SWALE TO STA. 20+00

FUTURE BUILDINGS (BY OTHERS)

MATCHLINE STA. 317+00

PROPOSED BUILDINGS FINISHED FLOOR 616.50 (BY OTHERS)

NEW 40 LF OF DEPRESSED CURB AND GUTTER

SEE NOTE 3

NEW GRADING LIMITS

LANSING DRAINAGE DITCH

TOP OF BERM 614.25 (TYPICAL)

GLENWOOD-LANSING ROAD

TAXIWAY A

NEW PAVED DITCH @ 0.20%

NEW DEPRESSED CURB AND GUTTER

NEW DEPRESSED CURB AND GUTTER 5' R (TYP)

TRIPLE 8'x4' BOX CULVERT

CONTRACTOR SHALL GRADE EXISTING DITCH TO MEET OPENING OF BOX CULVERT

EXISTING DITCH TO BE FILLED

SEE CROSS SECTIONS FOR GRADING THIS AREA

SEE GRADING PLAN – BORROW SITE FOR LEGEND

LA034

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UPDATE BY: johse
SURVEY BOOK #
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tbcint.dwg
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LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT AUTO PARKING LOT
AND TAXIWAY G2 EXTENSION

GRADING PLAN NORTH QUADRANT SITEWORK AND AUTO PARKING LOT

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A.I.P. PROJECT: 3-17-0121-B21

SHEET 12 OF 50 SHEETS

IMAGE FILES:

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LAYOUT: Layout1
UPDATE BY: johse
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tb.dwg
nethgr-base.dwg

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LANSING DRAINAGE DITCH

MATCH 609.80

BASELINE BORROW SITE

WENTWORTH AVENUE

5' (TYPICAL)

14' (TYP)

CONTRACTOR SHALL FILL EXISTING DRAINAGE SWALE

425'

750'

NEW CONCRETE PAVED DITCH @ 0.2%

NEW TOP OF BERM

NEW BORROW SITE

10' (TYP)

25'

50'

0.5%

0.2%

BASELINE BORROW SITE

220' 75' 75' 45' 45' 50' 50' 50' 5' (TYPICAL)

420' 200'

RUNWAY 9/27

TAXIWAY A

GLENWOOD-LANSING ROAD

NORTH
0 50 100
SCALE IN FEET

LEGEND

- NEW ELEVATION (610.85) / EXISTING ELEVATION (610.63)
- EXISTING CONTOUR
- NEW CONTOUR
- NEW GRADING LIMITS
- EXISTING MANHOLE/INLET/ SLOPE BOX
- NEW MANHOLE/INLET/END SECTION
- EXISTING FENCE
- NEW SILT FENCE
- NEW DRAINAGE FLOW
- NEW DEPRESSED CURB FOR DRAINAGE OUTLET
- NEW TRIPLE BOX CULVERT END SECTIONS
- NEW BITUMINOUS PAVEMENT
- NEW BITUMINOUS PAVEMENT (CONSTRUCT AFTER BUILDING FOUNDATIONS)

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

GRADING PLAN BORROW SITE

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Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

LA034

RADIUS CONTROL POINTS				
POINT	RADIUS*	STATION/OFFSET	NORTHING	EASTING
1	35'	506+99.71, 53' LT BASELINE ENTRANCE RD.	1776927.78	720005.31
2	35'	507+00, 53' RT BASELINE ENTRANCE RD.	1776929.81	720111.16
3	7.5'	499+99.85, 42' LT BASELINE ENTRANCE RD.	1776598.63	719709.81
4	6'	500+37.16, 44' LT BASELINE ENTRANCE RD.	1776623.38	719747.14
5	6'	502+82.00, 19' LT BASELINE ENTRANCE RD.	1776624.55	719919.13
6	6'	500+37.16, 18' LT BASELINE ENTRANCE RD.	1776597.38	719747.31
7	6'	502+56.00, 19' LT BASELINE ENTRANCE RD.	1776598.55	719919.31
8	6'	500+37.15, 18' RT BASELINE ENTRANCE RD.	1776561.38	719747.56
9	6'	502+9.15, 18' RT BASELINE ENTRANCE RD.	1776562.55	719919.56
10	6'	504+22.14, 204' RT BASELINE ENTRANCE RD.	1776562.73	719946.55
11	50'	503+52.15, 63' RT BASELINE ENTRANCE RD.	1776705.10	720000.58
12	45'	505+95.74, 63' LT BASELINE ENTRANCE RD.	1776824.08	771997.09
13	65'	505+91.57, 47' LT BASELINE ENTRANCE RD.	1776820.19	720013.16

* NOTE: ALL RADIUS' ARE TO EDGE OF PAVEMENT.

NOTES

1. CONTRACTOR SHALL SPLICE PROPOSED TAXIWAY CABLE TO EXISTING CABLE IN EXISTING TAXIWAY LIGHT CAN OR SPLICE CAN. CONTRACTOR SHALL USE L-823 CONNECTOR AND HEAT SHRINK TO MAKE CONNECTION. COST TO BE INCIDENTAL TO PROPOSED TAXIWAY CABLE.
2. ALL EXISTING AIRFIELD LIGHTING CIRCUITS SHALL BE OPERATIONAL AT THE END OF EACH WORKING DAY.
3. THE PROPOSED CONDUITS SHALL BE INSTALLED AT A DEPTH LOWER THAN THE UNDERDRAIN BY A MINIMUM OF ONE FOOT.
4. ADDITIONAL CABLE SLACK SHALL BE PLACED IN ALL HANDHOLES SO AS TO WRAP COMPLETELY AROUND IT ONE TIME.
5. THE PROPOSED CONCRETE PAD SHALL BE PER UTILITY'S REQUIREMENT. CONTRACTOR SHALL STUB-UP THE CONDUITS FOR PRIMARY CABLES AND SECONDARY SERVICE TO THE T-HANGARS (TYPICAL OF 2)
6. SEE ELECTRICAL DETAIL SHEET 4 FOR LIGHT POLE AND FOUNDATION DETAILS.
7. THE ROUTING OF THE PROPOSED CABLES AND CONDUITS SHOWN IS FOR INFORMATION ONLY. THE EXACT ROUTING SHALL BE COORDINATED WITH THE ENGINEER. ALL CONDUITS SHALL BE BURIED A MINIMUM 30" BELOW FINISHED GRADE.
8. IT IS CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF EXISTING UTILITIES. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
9. ANY SPLICES TO THE PROPOSED CABLES SHALL BE MADE INSIDE THE HANDHOLES OR POLE BASES. NO DIRECT BURIED SPLICES WILL BE ALLOWED. ALL SPLICES SHALL BE WATERPROOF AND SHALL HAVE HEAT SHRINK TUBING OVER ENTIRE SPLICE.
10. THE LOCATION OF THE PROPOSED LIGHTING TRANSCLOSURE IS APPROXIMATE AND SHALL BE FIELD ADJUSTED TO THE SATISFACTION OF THE ENGINEER. SEE ELECTRICAL DETAIL SHEET 3.
11. CONTRACTOR SHALL COORDINATE ALL SERVICE CONNECTIONS WITH UTILITY. CONTRACTOR SHALL PROVIDE 10'-0" RISER AT POLE AND COIL UP SUFFICIENT CABLES AT TRANSFORMER FOR UTILITY CONNECTIONS.
12. PROPOSED FUTURE CONDUIT SHALL EXTEND 5' BEYOND EDGE OF PAVEMENT. CONTRACTOR SHALL CAP SPARE CONDUIT FOR FUTURE USE.
13. GROUND ROD SHALL BE 3/4" DIA., 10' LONG. CONTRACTOR SHALL ROUTE 1 #8 GND. WIRE FROM GROUND ROD TO POWER PANEL GROUND LUG IN TRANSCLOSURE. GROUND ROD SHALL BE BURIED 1'-0" BELOW FINISH GRADE. CONNECTIONS TO GROUND ROD SHALL BE ONE-SHOT EXOTHERMIC TYPE.
14. CONTRACTOR SHALL PROVIDE PULL WIRE FOR ALL DUCT BANKS/CONDUITS AND CAP UNUSED DUCT BANKS/CONDUITS FOR FUTURE USE.

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UPDATE BY: johse
SURVEY BOOK #
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XREF DWG: nethgr-base.dwg
tbclnt.dwg
tb.dwg

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

LIGHTING AND PAVEMENT MARKING PLAN NORTH QUADRANT SITEWORK AND AUTO PARKING LOT

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000618

Lansing Municipal airport

DESIGN BY:	ARM
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A.I.P. PROJECT: 3-17-0121-B21

SHEET 14 OF 50 SHEETS

RESTRICTOR PLATE SCHEDULE

STRUCTURE	TYPE	RESTRICTOR DIAMETER
D2	B	4.0"
H1	A	4.38"
H3	A	4.32"
H4	A	7.9"

FOR CONTINUATION SEE INSET THIS SHEET

WATERMAIN/FIRE HYDRANT SCHEDULE

POINT NUMBER	STATION/OFFSET	NORTHING	EASTING	ELEVATION
1	16+66.10, 154.53' LT. ℄ TAXIWAY A	1776301.35	719085.79	–
2	16+74.10, 154.53' LT. ℄ TAXIWAY A	1776301.41	719093.79	RIM=MATCH EXISTING
3	17+05.15, 123.49' LT. ℄ TAXIWAY A	1776270.58	719125.05	–
4	24+96.38, 123.49' LT. ℄ TAXIWAY A	1776276.08	719916.26	–
5	25+10.52, 137.63' LT. ℄ TAXIWAY A	1776290.32	719930.30	–
6	502+59.36, 35' LT ℄ ENTRANCE RD.	1771559.69	732246.75	G/L= 616.78
7	503+11.14, 3' RT ℄ ENTRANCE RD.	1771611.48	732285.25	RIM= 615.84
8	505+59.06, 144' LT ℄ ENTRANCE RD.	1771735.46	732261.12	–
9	505+87, 160' LT ℄ ENTRANCE RD.	1771763.40	732244.91	–
10	323+56.42, 100.61' RT. ℄ TAXIWAY G2	1776809.47	719709.30	G/L= 614.25
11	323+51.12, 75.61' RT. ℄ TAXIWAY G2	1776804.00	719684.33	–
12	325+75.87, 75.61' RT. ℄ TAXIWAY G2	1777028.75	719682.77	RIM=MATCH EXISTING

UNDERDRAIN NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERDRAIN INVERTS BEFORE INSTALLING PROPOSED UNDERDRAIN, CONNECTIONS AND ORDERING UNDERDRAIN MATERIALS.
2. ALL UNDERDRAIN CONNECTIONS, CORING INTO STRUCTURES, TEES, BENDS, STORM SEWER ETC. SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE UNDERDRAIN.
3. UNDERDRAIN SLOPES FOLLOW EDGE OF PAVEMENT SLOPE UNLESS OTHERWISE NOTED.
4. INSTALL PROPOSED ELECTRICAL DUCTS/CONDUITS TO BE CLEAR OF UNDERDRAIN, COST INCIDENTAL.
5. UNDERDRAIN CONFLICTS WITH EXISTING CONDITIONS SHALL BE RESOLVED AND COST SHALL BE INCIDENTAL TO UNDERDRAIN.
6. PRIOR TO ORDERING AND INSTALLING ALL FIELD TILE REPLACEMENT PIPE, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND INVERTS OF EXISTING FIELD TILE CONNECTIONS. ADJUSTMENTS SHALL BE MADE AS NECESSARY AT NO ADDITIONAL COST TO THE CONTRACT.
7. CORING OF DRAINAGE STRUCTURE AND REMOVAL OF EXISTING STORM SEWER MANHOLE/INLET CONCRETE BENCHES TO FACILITATE CONNECTIONS OF PROPOSED STORM SEWER PIPE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE PIPE.

LEGEND

- NEW PAVEMENT
- NEW STORM SEWER
- NEW WATERMAIN
- NEW PAVED DITCH
- NEW GUARDRAIL
- NEW 6" PERFORATED UNDERDRAIN W/ SOCK
- NEW/RELOCATED 6' CLASS E FENCE
- NEW UNDERDRAIN COLLECTION STRUCTURE
- NEW MANHOLE/INLET
- NEW RCP FLARED END SECTION W/ GRATE
- NEW UNDERDRAIN HEADWALL
- NEW VALVE BOX
- NEW FIRE HYDRANT
- NEW DEPRESSED CURB FOR DRAINAGE OUTLET
- FUTURE IMPROVEMENTS

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tb.dwg
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REVISIONS		
NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
NORTH QUADRANT SITEWORK - PHASE 1 AND TAXIWAY G2 EXTENSION
LANSING, ILLINOIS
DRAINAGE, FENCE AND UTILITY PLAN

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000618

Lansing Municipal airport

DESIGN BY:	ARM/MW
DRAWN BY:	JRO
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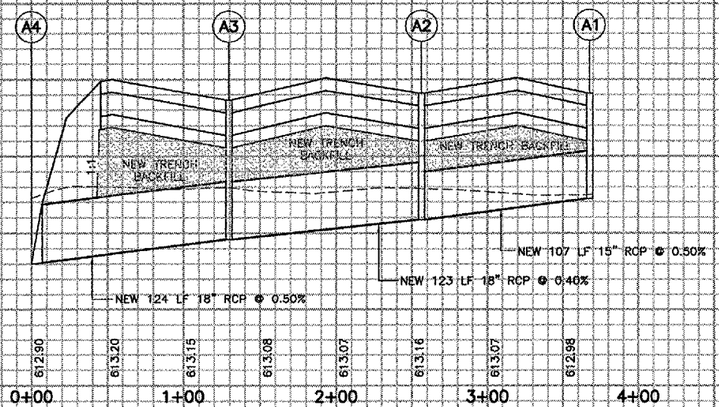
DATE:	03/04/05
JOB No:	03297–02

IL PROJECT: IGQ–3329
A.I.P. PROJECT: 3–17–0121–B21

SHEET 15 OF 50 SHEETS

LA034



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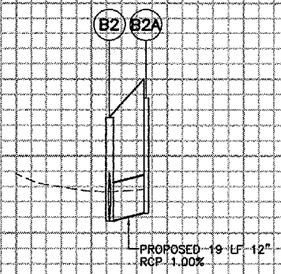

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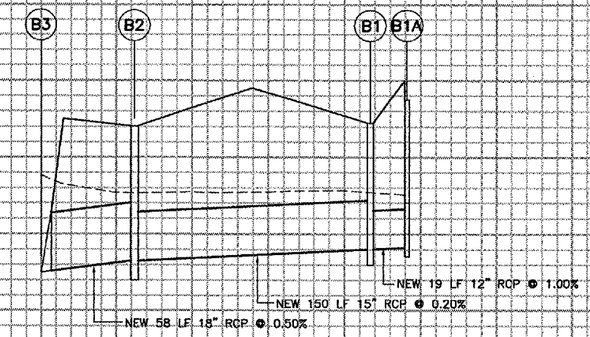

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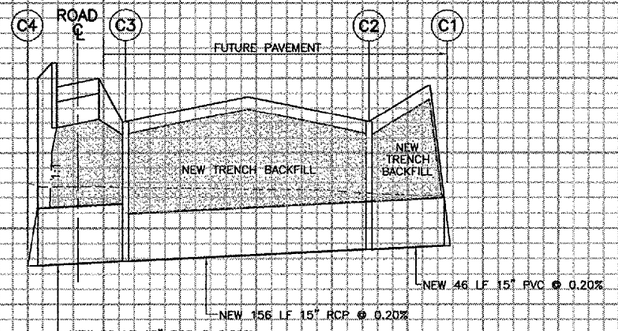

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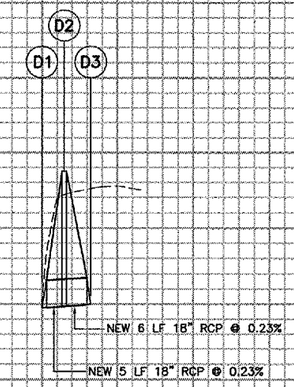

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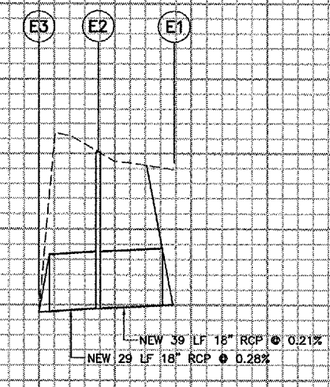

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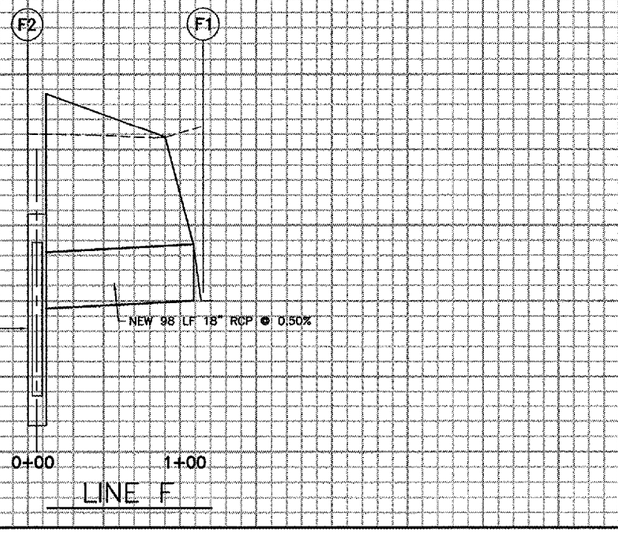

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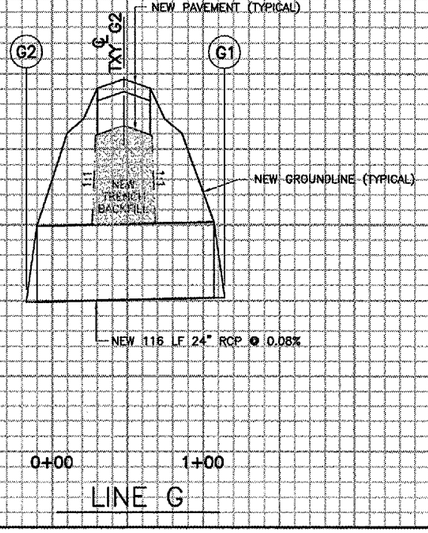

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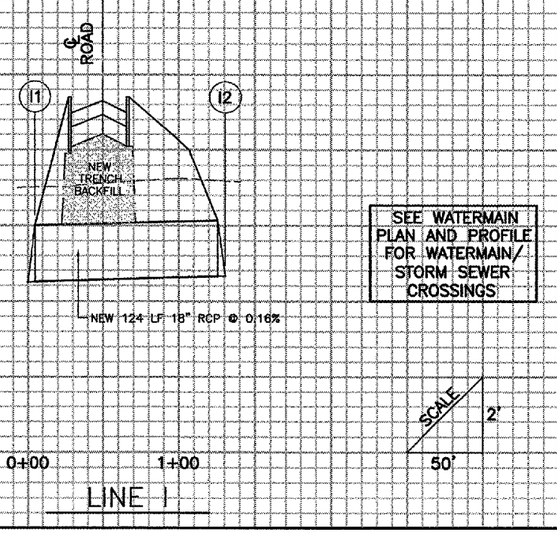

LINE I

SEE WATERMAIN PLAN AND PROFILE FOR WATERMAIN/ STORM SEWER CROSSINGS

SCALE 2' 50'

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FILE: ssprof.dwg
LAYOUT: Layout1
UPDATE BY: johse
SURVEY BOOK #
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XREF DWG: tbcint.dwg
tb.dwg

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

STORM SEWER PROFILES

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
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A.I.P. PROJECT: 3-17-0121-B21

SHEET 16 OF 50 SHEETS

LA034

LEGEND

NEW PAVEMENT	EXISTING GAS LINE
NEW WATERMAIN	EXISTING GUARDRAIL
NEW STORM SEWER	NEW LINE STOP
NEW FENCE	NEW FIRE HYDRANT
NEW UNDERDRAIN	NEW 8"x12" INCREASER
NEW GUARDRAIL	NEW GATE VALVE AND BOX
EXISTING CONTOUR	NEW INLET/MANHOLE/ FLARED END SECTION
EXISTING STORM SEWER	
EXISTING UNDERDRAIN	NEW PAVED DITCH
EXISTING WATERMAIN	EXISTING INLET/MANHOLE
EXISTING RIGHT-OF-WAY	EXISTING SLOPE BOX

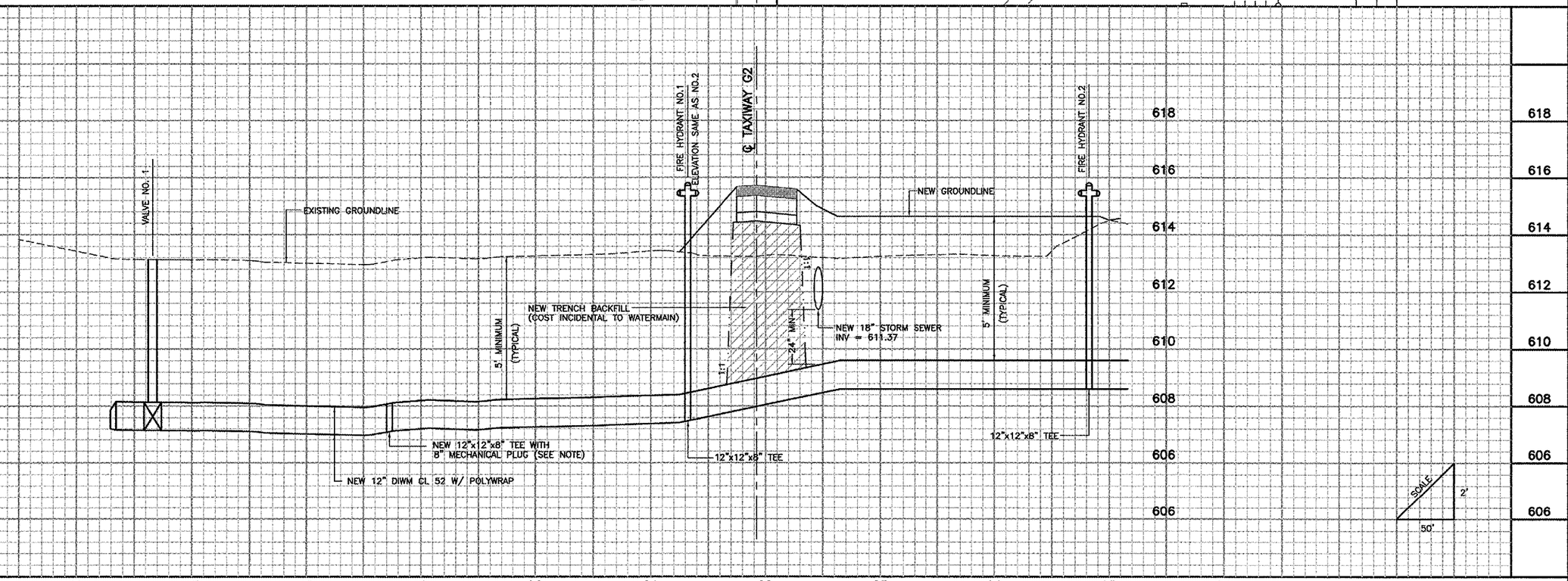
NORTH
0 50 100
SCALE IN FEET

FOR CONTINUATION SEE WATERMAIN PLAN AND PROFILE SHEET 2

POINT 1
NEW 12" GATE VALVE AND BOX
POINT 2
45° BEND
POINT 3
45° BEND
POINT 4
12"x12"x8" TEE
WITH MECHANICAL PLUG
POINT 5
12"x12"x8" TEE
POINT 6
FIRE HYDRANT
NO.1
POINT 7
12"x12"x8"
TEE
POINT 8
FIRE HYDRANT
NO.2
POINT 9
45° BEND
POINT 10
45° BEND
NEW 10LF
OF 8"
FUTURE
FIRE HYDRANT
NEW 8" LINE STOP
CONTRACTOR REMOVE
UPON CONNECTION,
PRESSURE TESTING
AND CHLORINATION
OF NEW WATERMAIN
REMOVE MECHANICAL PLUG AND INSTALL NEW 10 LF
8" D.I.P. W/ 1-8"x12" INCREASER
+17
58' LT
123.50'
TAXIWAY A

NOTES

1. CONTRACTOR SHALL MARK WITH POST AND TRIANGULATE TEE LOCATION. TRIANGULATION RESULTS SHALL BE GIVEN TO ENGINEER. COST SHALL BE INCIDENTAL TO WATERMAIN.
2. CONTRACTOR SHALL OBTAIN ALL APPLICABLE WATERMAIN PERMITS. INCLUDING VILLAGE OF LANSING AND IEPA.



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REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

WATERMAIN PLAN AND PROFILE SHEET 1

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	MJW/ARM
DRAWN BY:	JRO
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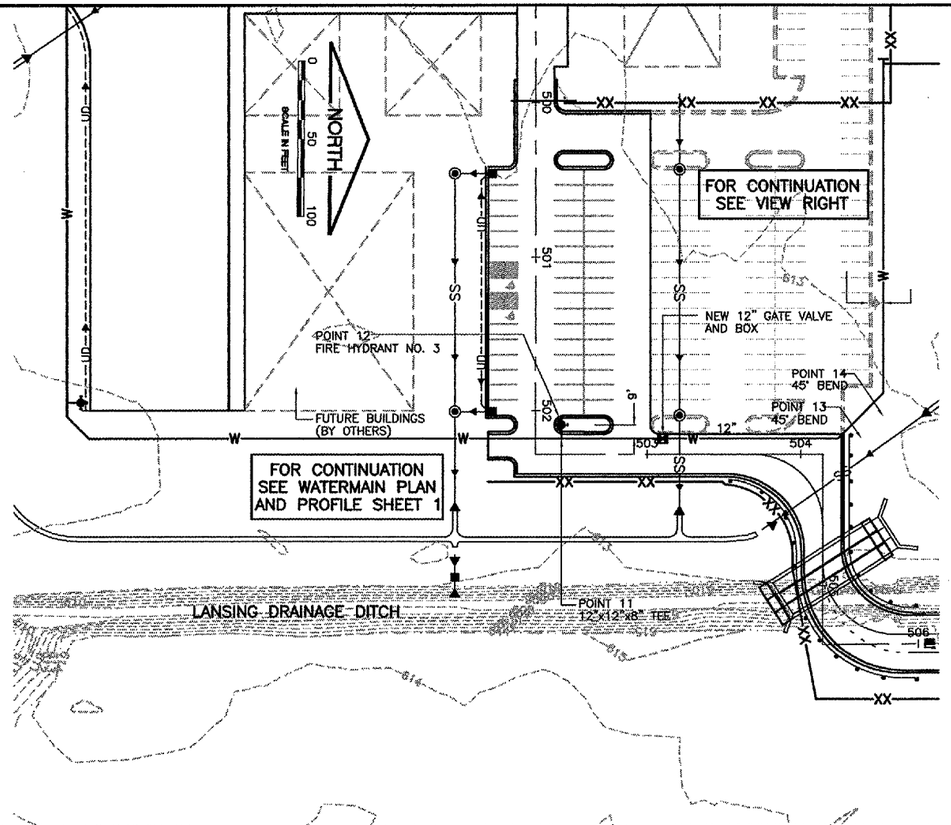
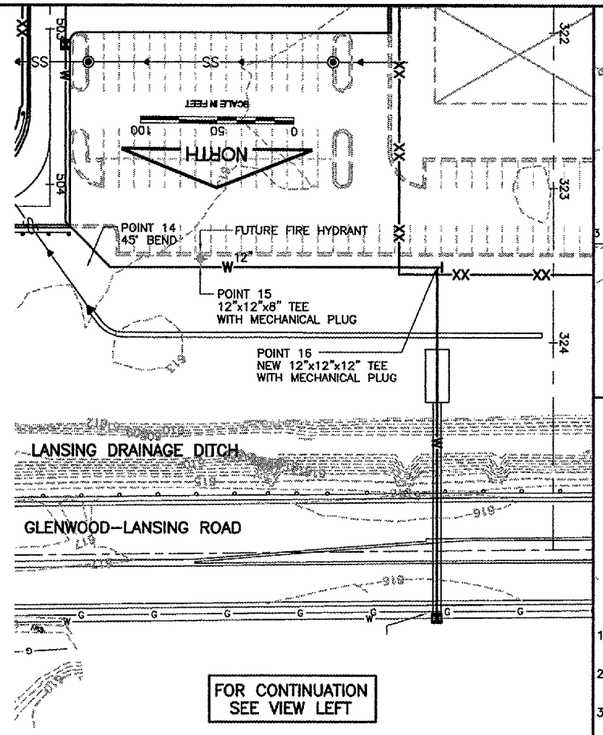
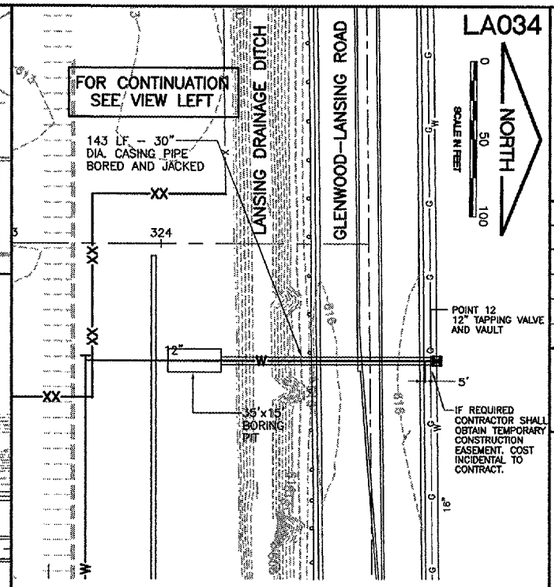


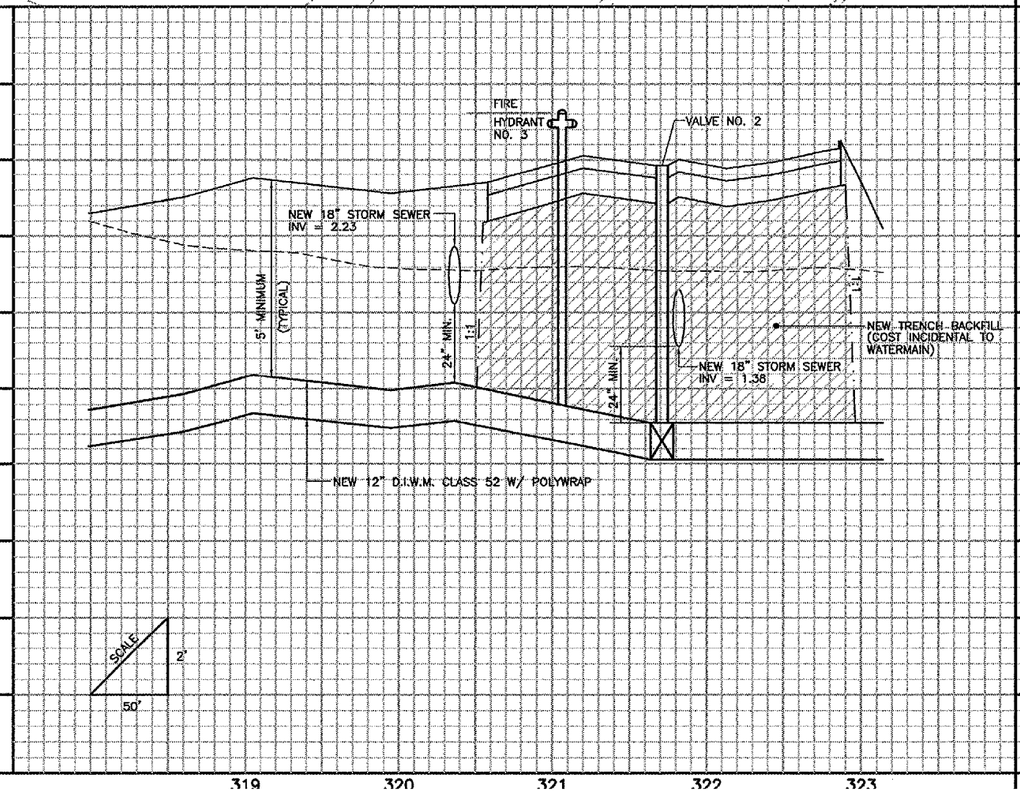


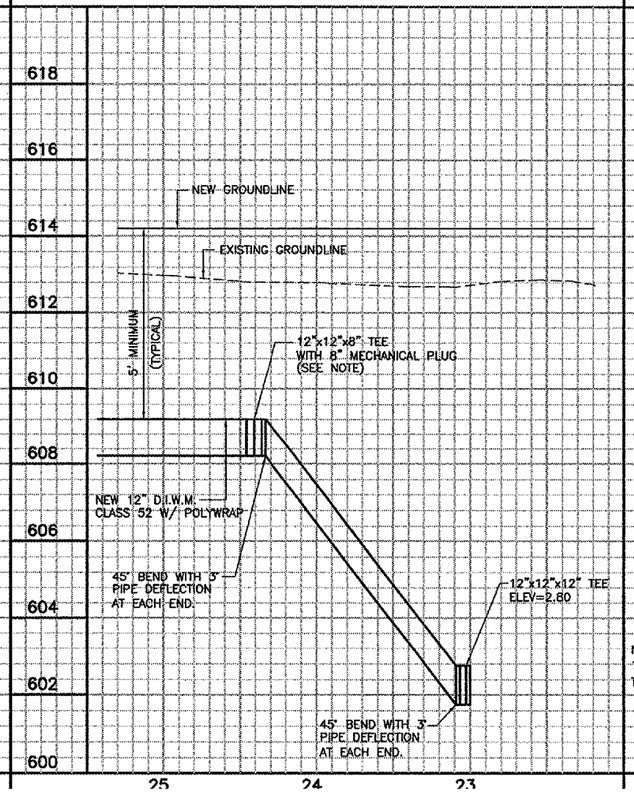
NOTE:
CONTRACTOR SHALL MARK WITH POST AND TRIANGULATE TEE LOCATION. TRIANGULATION RESULTS SHALL BE GIVEN TO ENGINEER. COST SHALL BE INCIDENTAL TO WATERMAIN.

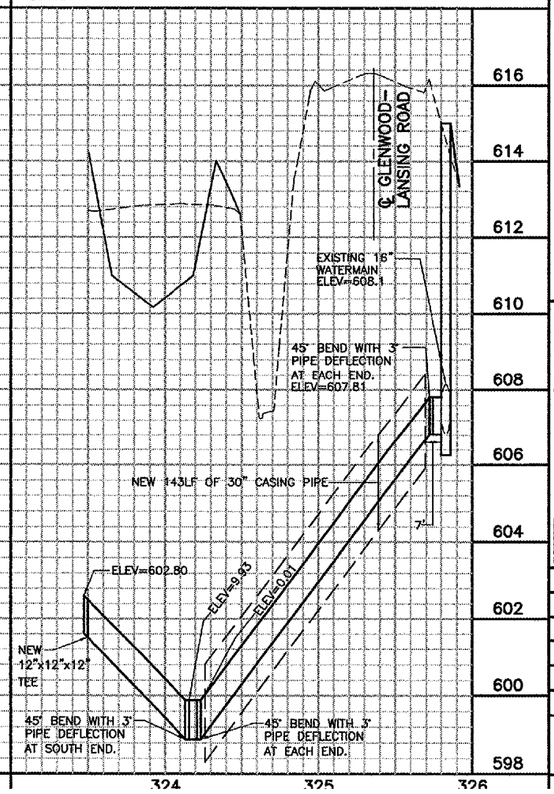


BORING AND JACKING NOTES

1. CONTRACTOR TO PROVIDE SHORING AND BRACING OF BORE PIT AND RECEIVING PIT AS NEEDED.
2. CONTRACTOR TO PROVIDE PLAN SKETCH OF PROPOSED SHORING AND BRACING PLAN THAT HAS BEEN PREPARED AND SEALED BY A LICENSED STRUCTURAL ENGINEER.
3. CONTRACTOR TO PROVIDE TRENCH DEWATERING, COST INCIDENTAL TO BORE AND JACK.
4. WATER FROM TRENCH DEWATERING SHALL BE RELEASED AT VELOCITIES THAT WILL NOT CAUSE SCOUR NOR SHALL IT CONTAIN LARGE AMOUNTS OF SILT MATERIALS. ALL DEWATERING SHALL BE DONE IN CONFORMANCE WITH THE PROJECT'S NPDES PERMIT.
5. CONTRACTOR OPERATIONS SHALL NOT DISTURB INTEGRITY OF LANSING DRAINAGE DITCH.







LA034

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tb.dwg
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REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
NORTH QUADRANT SITEWORK - PHASE 1 AND TAXIWAY G2 EXTENSION
LANSING, ILLINOIS
WATERMAIN PLAN AND PROFILE SHEET 2

CMT
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CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

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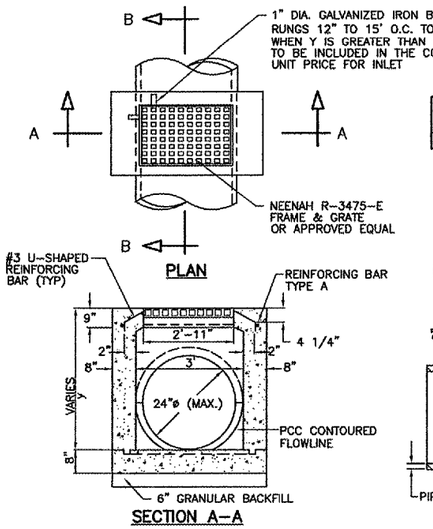
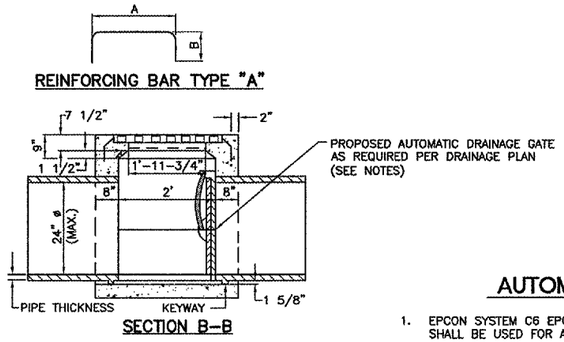
SHEET 18 OF 50 SHEETS



REINFORCING BAR SCHEDULE

TYPE	PER INLET	DIMENSIONS A	DIMENSIONS B	SIZE	APPROX.WT.OF BARS IN INLET
A	2	3'4"	2'4"	#5	16.7

REINFORCING STEEL BARS TYPES



TYPE 1 INLET
NOT TO SCALE

NOTES

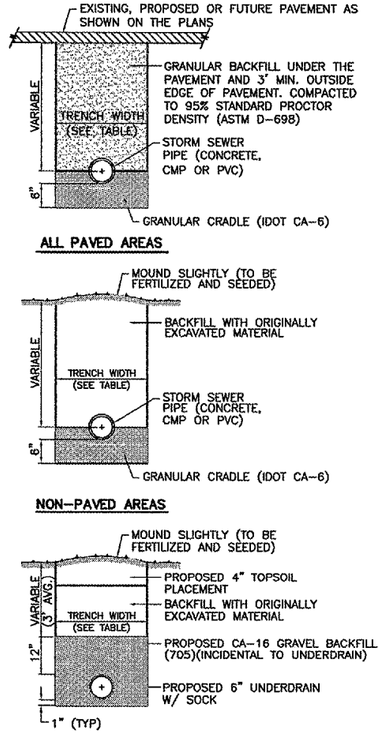
1. 1/2" CHAMFER TO BE USED ON ALL EXPOSED CORNERS ON INLETS. BARS TO BE INSTALLED 2" FROM FACE OF WALL.
2. INLET TO BE CONSTRUCTED OF STRUCTURAL P.C. CONCRETE. THE CONTRACT UNIT PRICE FOR INLET SHALL INCLUDE THE GRATE AND FRAME AS SPECIFIED.

AUTOMATIC DRAINAGE GATE NOTES:

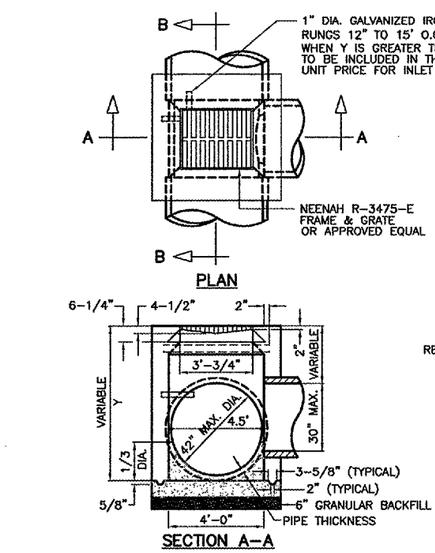
1. EPCON SYSTEM C6 EPOXY ANCHORS MANUFACTURED BY ITW, RAMSET, REDHEAD CO. OR EQUAL SHALL BE USED FOR ANCHORING THE BOLTS.
2. ANCHOR BOLT SIZE SHALL BE AS SPECIFIED BY DRAINAGE GATE MANUFACTURER. ALL ANCHOR BOLTS, SCREWS AND NUTS SHALL BE GALVANIZED STEEL, ASTM A307 AND ASTM A164 OF AMPLE SECTION TO SAFELY WITHSTAND FORCES CREATED BY OPERATION SHOWN ON MANUFACTURER'S GATE SCHEDULE.
3. USE OF MECHANICAL/EXPANSION TYPE ANCHORS SHALL NOT BE CONSIDERED AS AN ACCEPTABLE ALTERNATE TO THE SPECIFIED CHEMICAL SYSTEMS.
4. ANCHOR BOLTS SHALL BE EMBEDDED A MINIMUM DEPTH OF 6" INTO THE PRECAST PORTION OF THE TYPE 1 INLET AND TYPE 2 INLET WALLS. ANCHORING THE BOLTS INTO THE MORTARED PORTION OF THE INLET BETWEEN THE OUTSIDE OF THE DRAINAGE PIPE AND THE OPENING OF THE DRAINAGE INLET WILL NOT BE ALLOWED.
5. ANCHOR BOLTS SHALL BE INSTALLED IN THE PRECAST PORTION A MINIMUM OF 3" FROM THE FACE OF THE DRAINAGE STRUCTURE PIPE OPENING.
6. AUTOMATIC DRAINAGE GATES SHALL BE NEENAH R-5050-SF OR EQUAL WITH MINIMUM SIZES AS SHOWN BELOW:

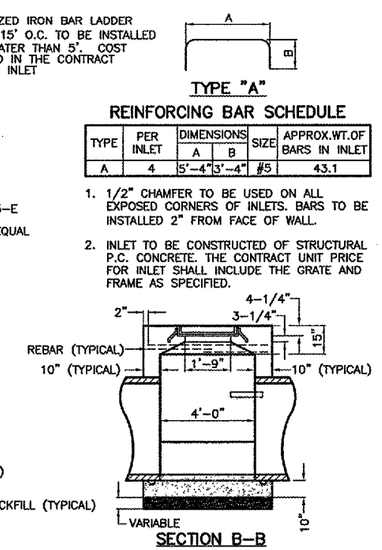
   - R-5050-SF30 FOR 18" DIAMETER PIPE OPENING.

INSIDE DIAMETER OF STORM SEWER (INCHES)	MAXIMUM TRENCH WIDTH
6	3'-7"
8	3'-9"
12	4'-2"
15	4'-6"
18	4'-9"
21	5'-0"
24	5'-4"
27	5'-7"
30	5'-11"
36	6'-6"
42	7'-1"
48	7'-8"
54	8'-3"
60	8'-10"
66	9'-5"
72	10'-0"
78	10'-7"
84	11'-2"
90	11'-9"
96	12'-4"
102	12'-11"
108	13'-6"



TRENCH DETAILS - STORM SEWER
NOT TO SCALE





REINFORCING BAR SCHEDULE

TYPE	PER INLET	DIMENSIONS A	DIMENSIONS B	SIZE	APPROX.WT.OF BARS IN INLET
A	4	5'-4"	3'-4"	#5	43.1

1. 1/2" CHAMFER TO BE USED ON ALL EXPOSED CORNERS OF INLETS. BARS TO BE INSTALLED 2" FROM FACE OF WALL.
2. INLET TO BE CONSTRUCTED OF STRUCTURAL P.C. CONCRETE. THE CONTRACT UNIT PRICE FOR INLET SHALL INCLUDE THE GRATE AND FRAME AS SPECIFIED.

PROPOSED TYPE 2 INLET
NOT TO SCALE

LA034

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UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Sun 3/28/04 9:02am

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

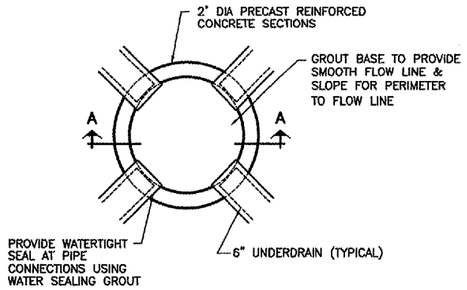
DRAINAGE DETAILS - SHEET 1

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

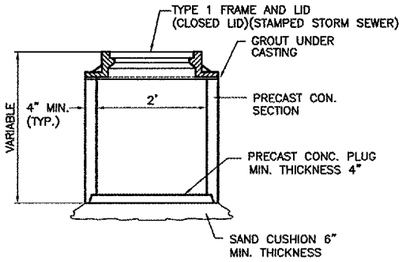
Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21



PLAN VIEW



SECTION A–A

UNDERDRAIN COLLECTION STRUCTURE DETAIL

NOT TO SCALE

MWRDGC GENERAL NOTES (APPLIES TO ALL SANITARY SEWER)

1. THE MWRDGC SEWER PERMIT SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) DAYS PRIOR TO THE COMMENCEMENT OF WORK (CALL 708–588–4055).

2. ELEVATION DATUM IS USGS.

3. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER.

4. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER.

5. ALL SANITARY PIPE (AND STORM IN COMBINED AREAS) SHALL CONFORM TO THE FOLLOWING:
   DUCTILE IRON PIPE ASTM A–21.5
   PVC ASTM D 3034 SDR26

   JOINT SPECIFICATIONS SHALL CONFORM TO THE FOLLOWING.
   DUCTILE IRON PIPE ASTM A–21.11
   PVC ASTM D 3212

6. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS) REQUIRES STONE BEDDING 1/4" TO 1" IN SIZE, WITH A MINIMUM BEDDING THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES OR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA–11 OR CA–13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.

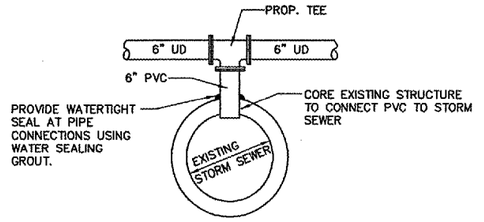
7. "BAND SEAL" OF SIMILAR FLEXIBLE–TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPE OF DISSIMILAR MATERIALS.

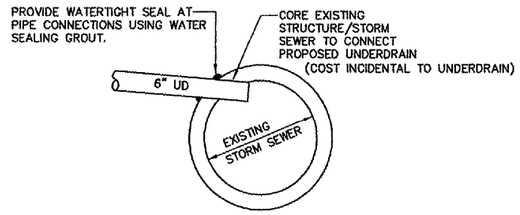
8. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED.
   1. CIRCULAR SAW–CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUB–WYE SADDLE OR HUB–TEE SADDLE.
   2. REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
   3. WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND–SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.

9. WHEREVER A SEWER CROSSES UNDER A WATER MAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN SHALL BE 18 INCHES, FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY SEWERS AND WATER MAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATER MAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTENCES DESCRIBED ABOVE CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS.

10. ALL EXISTING SEPTIC SYSTEMS ARE TO BE ABANDONED. ABANDONED ARE TANKS TO BE FILLED OR REMOVED.

11. ALL SANITARY MANHOLES, AND STORM MANHOLES IN COMBINED SEWER AREAS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE–CAST REINFORCED CONCRETE.

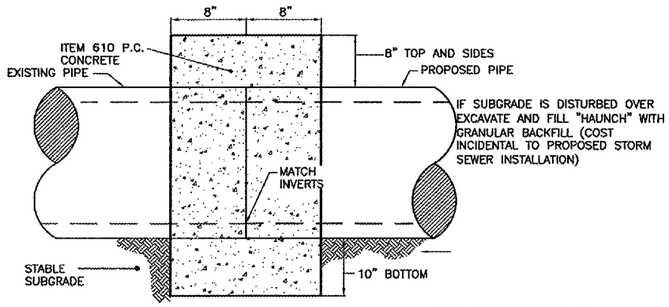




UNDERDRAIN CONNECTION DETAILS

NOT TO SCALE

UNDERDRAIN CONNECTIONS AND FITTINGS, TEES AND ELBOWS USED FOR CONNECTIONS TO PROPOSED STRUCTURES AND STORM SEWERS / EXISTING STRUCTURES AND STORM SEWERS, SHALL BE CONSIDERED INCIDENTAL TO THE PROPOSED UNDERDRAIN.

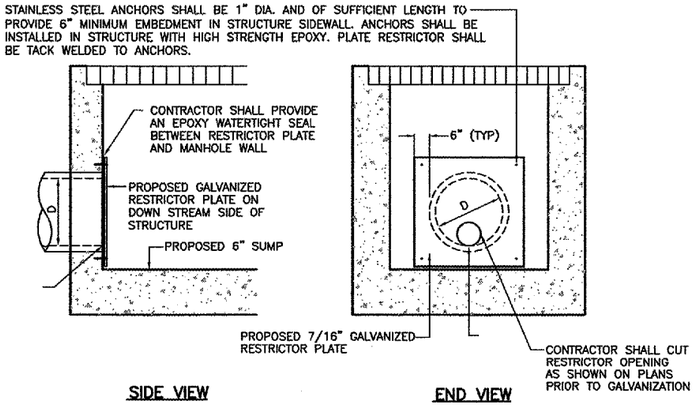


NOTE: COST INCIDENTAL TO INSTALLATION OF PROPOSED PIPE

CONCRETE COLLAR - STORM SEWER

NOT TO SCALE

STAINLESS STEEL ANCHORS SHALL BE 1" DIA. AND OF SUFFICIENT LENGTH TO PROVIDE 6" MINIMUM EMBEDMENT IN STRUCTURE SIDEWALL. ANCHORS SHALL BE INSTALLED IN STRUCTURE WITH HIGH STRENGTH EPOXY. PLATE RESTRICTOR SHALL BE TACK WELDED TO ANCHORS.

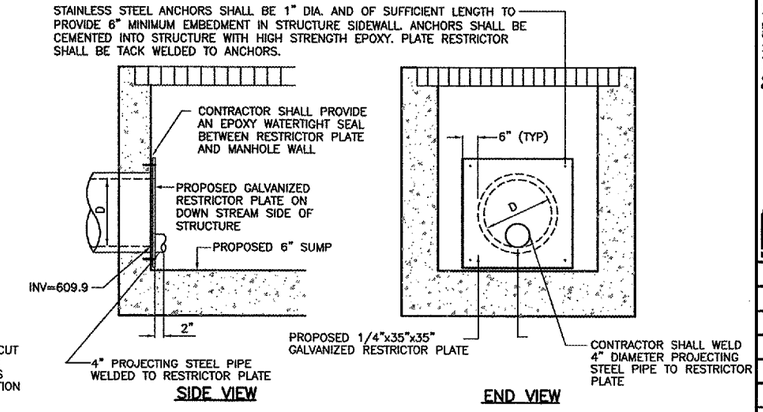


SIDE VIEW END VIEW

RESTRICTOR PLATE DETAIL-TYPE A

N.T.S.

STAINLESS STEEL ANCHORS SHALL BE 1" DIA. AND OF SUFFICIENT LENGTH TO PROVIDE 6" MINIMUM EMBEDMENT IN STRUCTURE SIDEWALL. ANCHORS SHALL BE CEMENTED INTO STRUCTURE WITH HIGH STRENGTH EPOXY. PLATE RESTRICTOR SHALL BE TACK WELDED TO ANCHORS.



SIDE VIEW END VIEW

RESTRICTOR PLATE DETAIL-TYPE B

N.T.S.

DRAINAGE STRUCTURE SCHEDULE

LA034

POINT NO.	STATION / OFFSET	DESCRIPTION	RIM	INVERT
A1	STA. 321+38.0 CENTERLINE OF TXY G2	TYPE 1 INLET	615.54	15" RCP SOUTH = 612.88 6" U.D. SOUTH = 613.21
A2	STA. 320+26.7 CENTERLINE OF TXY G2	TYPE 1 INLET	615.64	15" RCP NORTH = 612.33 18" RCP SOUTH = 612.33 6" U.D. NORTH = 612.89 6" U.D. SOUTH = 612.89
A3	STA. 319+00.0 CENTERLINE OF TXY G2	TYPE A–4 MANHOLE WITH TYPE 1 OPEN FRAME AND LID	615.30	18" RCP NORTH = 611.84 18" RCP SOUTHEAST = 611.84 6" U.D. NORTH = 612.46
A4	STA. 317+92.5, 72.6' RT. CENTERLINE OF TXY G2	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A.	611.20
B1	STA. 500+45.64, 52.58' RT BASELINE ENTRANCE RD.	TYPE A–4 MANHOLE WITH TYPE 1 FRAME AND OPEN LID	614.80	12" RCP NORTH = 611.62 15" RCP EAST = 611.62
B2	STA. 502+00.64, 52.58' RT BASELINE ENTRANCE RD.	TYPE A–5 MANHOLE WITH TYPE 1 FRAME AND OPEN LID	614.70	12" RCP NORTH = 611.32 18" RCP EAST = 611.32 15" RCP WEST = 611.32
B3	STA. 504+50, 238.57' RT BASELINE ENTRANCE RD.	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A.	611.00
B1A	STA.500+45.64, 32.58' RT BASELINE ENTRANCE RD.	TYPE A INLET WITH TYPE 12 FRAME AND LID	615.50	12" RCP SOUTH = 611.81 6" U.D. SOUTHEAST=612.88
B2A	STA. 502+00.64, 32.58' RT BASELINE ENTRANCE RD.	TYPE A INLET WITH TYPE 12 FRAME AND LID	615.50	12" RCP SOUTH = 611.51 6" U.D. SOUTHWEST=612.88
C1	STA. 499+91.38, 93' LT BASELINE ENTRANCE RD.	CONCRETE FLARED END SECTION WITH GRATE – 15"	N.A.	611.54
C2	STA. 500+41.57, 93' LT BASELINE ENTRANCE RD.	TYPE A–4 MANHOLE WITH TYPE 8 LID	614.83	15" RCP EAST = 611.44 15" RCP WEST = 611.44
C3	STA. 503+21.16, 22.42' LT BASELINE ENTRANCE RD.	TYPE A–4 MANHOLE WITH TYPE 8 LID	614.83	18" RCP EAST = 611.13 15" RCP WEST = 611.13
C4	STA. 503+21.16, 40' RT BASELINE ENTRANCE RD.	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A.	611.00
D1	STA. 504+75, 238.58' RT BASELINE ENTRANCE RD.	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	609.97
D2	STA. 504+89, 238.58' RT BASELINE ENTRANCE RD.	TYPE 1 INLET WITH RESTRICTOR PLATE ON EAST WALL	613.50	18" RCP EAST = 609.93 18" RCP WEST = 609.94
D3	STA. 505+01.96, 238.58' RT BASELINE ENTRANCE RD.	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A.	609.90
E1	STA. 10+94.75, 125' RT BASELINE BORROW SITE	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	610.00
E2	STA. 10+50, 125' RT BASELINE BORROW SITE	TYPE 1 INLET WITH AUTOMATIC DRAINAGE GATE ON EAST WALL	614.00	18" RCP EAST = 609.90 18" RCP WEST = 609.90
E3	STA. 10+15, 125' RT BASELINE BORROW SITE	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	609.80
F1	STA. 10+94.75, 99.9' LT BASELINE BORROW SITE	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	610.00
F2	STA. 505+13, 20.5' RT BASELINE ENTRANCE RD.	INTERSECTION WITH BOX CULVERT	N.A	18" RCP EAST = 609.51
G1	STA. 315+90.9, 65' LT. CENTERLINE OF TXY G2	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	610.07 ±MATCH FLUME INVERT
G2	STA. 315+90.9, 65' RT. CENTERLINE OF TXY G2	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	609.97 ±MATCH FLUME INVERT
H1	STA. 312+39.4, 91.9' LT. CENTERLINE OF TXY G2	TYPE 1 INLET WITH RESTRICTOR PLATE ON SOUTH WALL	614.38±	12" RCP NORTH = 611.36± 12" RCP SOUTH = 611.36±
H2	STA. 312+58, 71.5' RT. CENTERLINE OF TXY G2	CONCRETE FLARED END SECTION WITH GRATE – 12"	N.A	610.92
H3	STA. 312+33.2, 71.5' RT. CENTERLINE OF TXY G2	TYPE 1 INLET WITH RESTRICTOR PLATE ON SOUTH WALL	614.51	12" RCP NORTH = 610.77± 12" RCP SOUTH = 610.75±
H4	STA. 315+90.9, 254.7' RT. CENTERLINE OF TXY G2	TYPE 2 INLET WITH RESTRICTOR PLATE ON EAST WALL	614.20	30" RCP EAST = 609.51± 30" RCP WEST = 609.51±
I1	STA. 504+67, 43' RT BASELINE ENTRANCE RD.	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	18" RCP SOUTH = 610.45
I2	STA. 506+02.13, 147.61' LT BASELINE ENTRANCE RD.	CONCRETE FLARED END SECTION WITH GRATE – 18"	N.A	18" RCP NORTH = 610.65

NOTE: 1. ± DENOTES CONTRACTOR SHALL VERIFY RIMS/INVERTS PRIOR TO ORDERING MATERIALS.
2. TYPE B GRATES SHALL BE PLACED ON 4" ADJUSTING RINGS.
3. TYPE 12 FRAME AND LID RIMS ARE ELEVATIONS AT EDGE OF PAVEMENT.
4. TYPE 12 FRAME AND LID STATIONS/OFFSETS ARE REFERENCED TO BACK OF CURB.

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XREF DWG:
DATE: Sun 3/28/04 9:02am

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

DRAINAGE DETAILS AND SCHEDULE - SHEET 2

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Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297–02

IL PROJECT: IGQ–3329
A.I.P. PROJECT: 3–17–0121–B21

SHEET 20 OF 50 SHEETS

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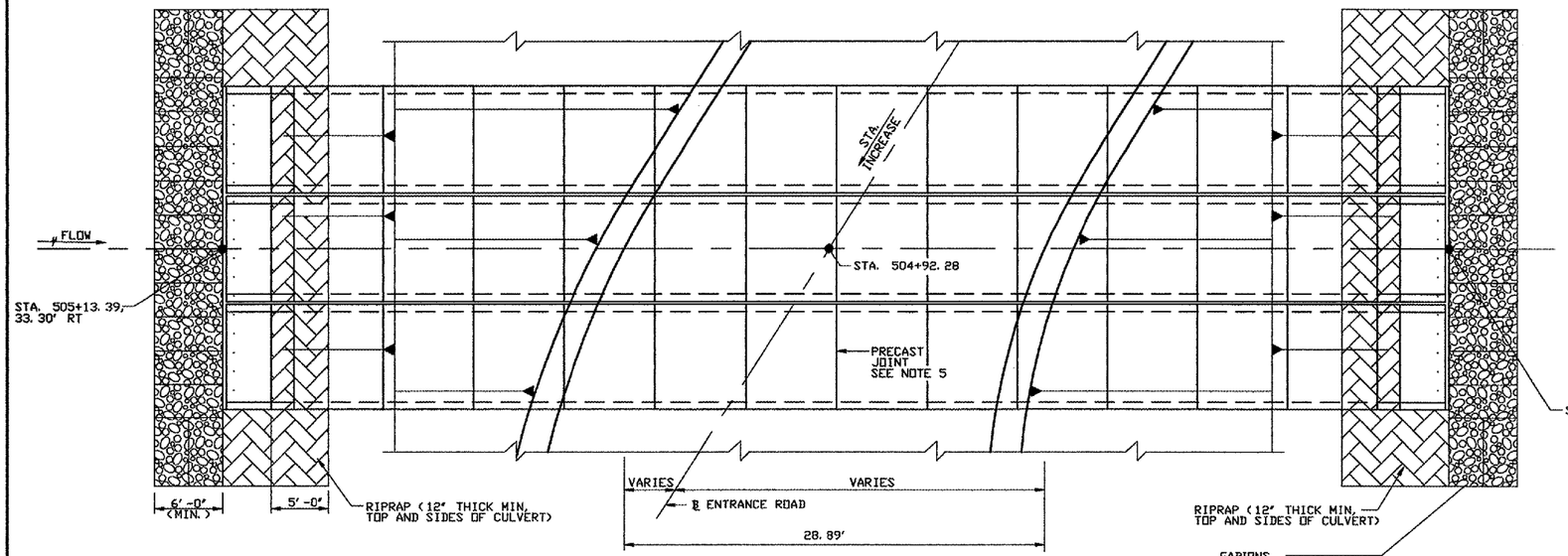
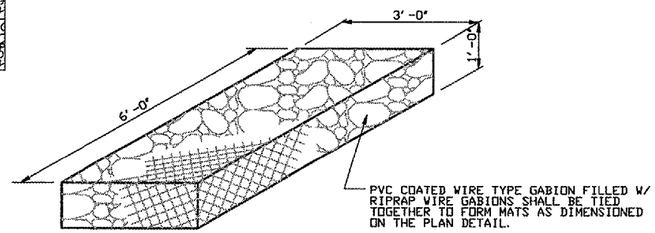


PLAN-8'X4' PRECAST BOX CULVERT (TRIPLE BARREL)

N. T. S.

NOTES

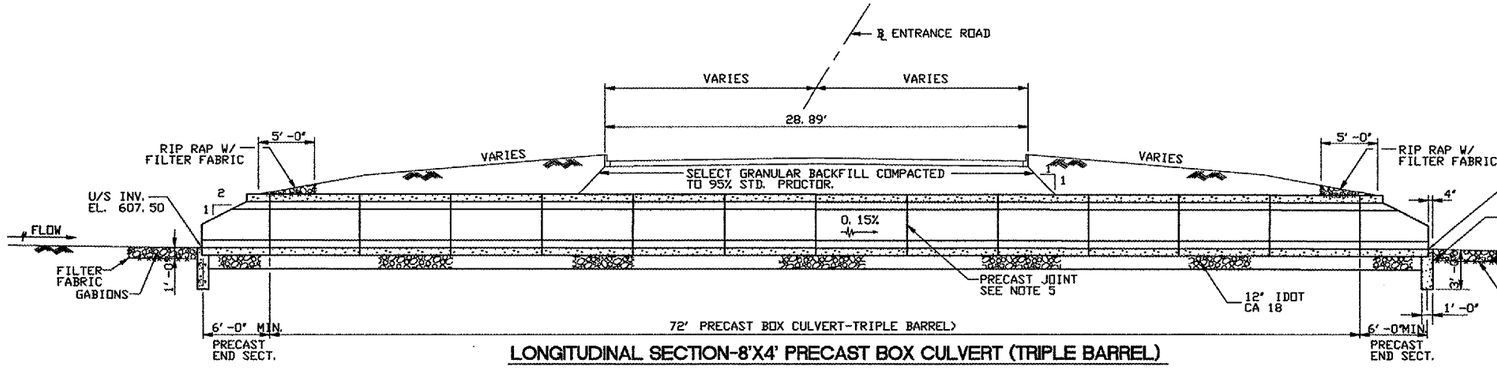
1. ALL PRECAST BOX CULVERTS SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO M273, HS-20 LOADING.
2. PRIOR TO BACKFILLING, FILL SOLID THE 3" JOINT BETWEEN BARRELS WITH CONCRETE (610) USING A MAXIMUM SIZE AGGREGATE OF 3/8 INCH.
3. GROUT ALL LIFTING HOLES BEFORE BACKFILLING, ALLOW GROUT TO ACHIEVE MINIMUM STRENGTH BEFORE BACKFILLING.
4. DURING BACKFILL PLACEMENT, DO NOT PERMIT A DIFFERENCE IN FILL ELEVATION ON THE WALLS OF THE CULVERT IN EXCESS OF 2 FEET. DURING COMPACTION, DO NOT ALLOW WHEELS OF ROLLERS TO COME CLOSER THAN ONE FOOT TO THE FACE OF THE STRUCTURE.
5. JOINT MATERIAL BETWEEN PRECAST SECTIONS SHALL CONFORM TO SECTION 1056 OR SECTION 1055 OF IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2002.
6. ALL BOX CULVERT END SECTIONS SHALL HAVE A PRECAST OR CAST IN PLACE TOEWALL
7. ANY ACCUMULATED DEBRIS WITHIN THE PROJECT AS A RESULT OF THE IMPROVEMENT SHALL BE REMOVED AND DISPOSED OF SATISFACTORILY BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF DRAINAGE AT ALL TIMES DURING THE CONSTRUCTION OF THE CULVERT. THE METHODS USED BY THE CONTRACTOR SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST FOR THIS REQUIREMENT WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.



GABION DETAIL

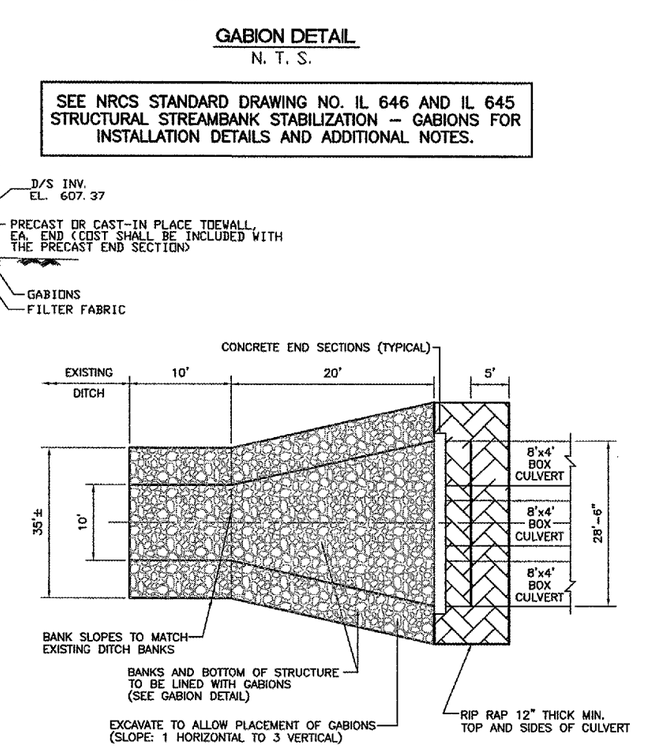
N. T. S.

SEE NRCS STANDARD DRAWING NO. IL 646 AND IL 645 STRUCTURAL STREAMBANK STABILIZATION — GABIONS FOR INSTALLATION DETAILS AND ADDITIONAL NOTES.



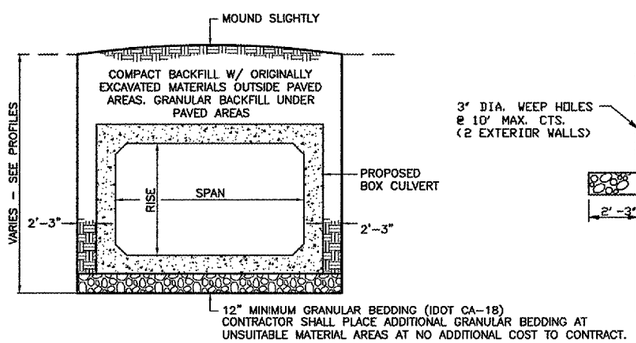
LONGITUDINAL SECTION-8'X4' PRECAST BOX CULVERT (TRIPLE BARREL)

N. T. S.



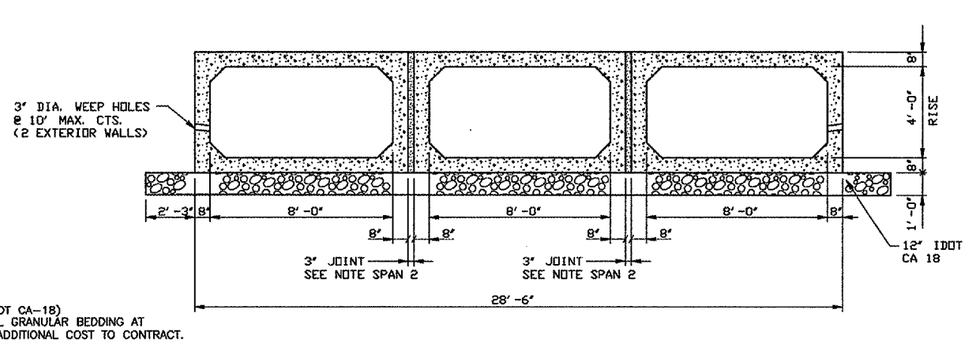
PLAN OF GABION PLACEMENT FOR INLET/OUTLET STRUCTURE

N. T. S.



BOX CULVERT TRENCH DETAIL

N. T. S.



TYPICAL SECTION- 8'x4' PRECAST CONCRETE BOX CULVERT

N. T. S.

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UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Wed 5/12/04 4:47pm

REVISIONS

NUMBER	BY	DATE

0 1 2

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

PRECAST BOX CULVERT DETAILS

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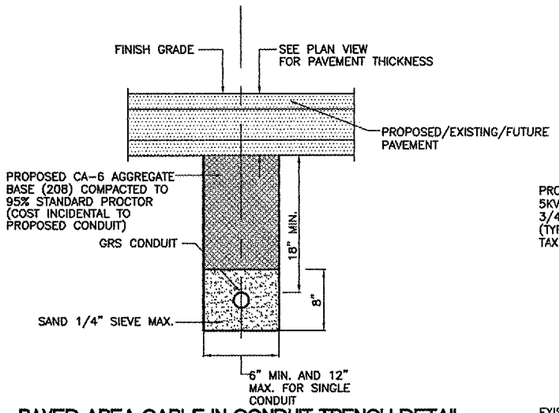
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	DKP
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

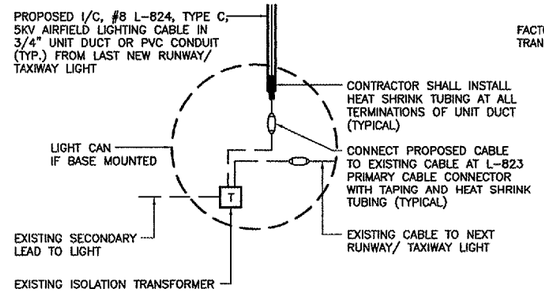
SHEET 21 OF 50 SHEETS



PAVED AREA CABLE IN CONDUIT TRENCH DETAIL

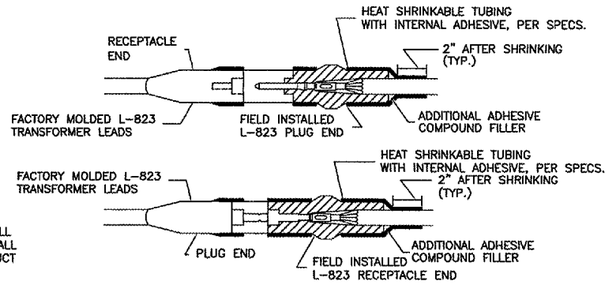
N.T.S.

NOTE: CONDUIT SHALL BE INSTALLED AT AN ELEVATION THAT WILL NOT CONFLICT WITH THE OTHER UTILITIES SUCH AS SANITARY SEWER, STORM SEWER, WATERMAIN, UNDERDRAIN, AND ETC.



RUNWAY/TAXIWAY LIGHTING CIRCUIT CONNECTION DETAIL

NOT TO SCALE



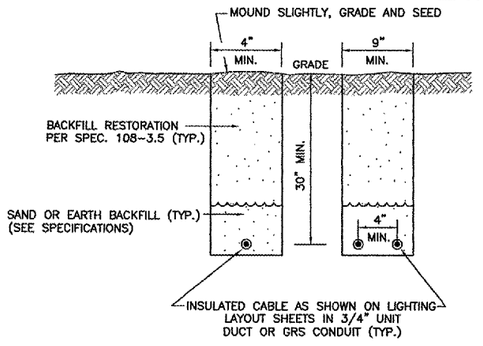
TYPE C AND D - CABLE SPLICE

FOR SPLICES AT RUNWAY/TAXIWAY LIGHTS AND SIGNS

NOT TO SCALE

CABLE SPLICE NOTES

1. INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.
2. WRAP WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF JOINT.
3. THE COST OF FURNISHING AND INSTALLING ALL SPLICE MATERIALS SHALL BE INCIDENTAL TO THE ASSOCIATED CABLE ITEMS.
4. THE CONTRACTOR SHALL HAVE A MINIMUM OF TWO (2) TYPE A SPLICE KITS ON THE JOB SITE AT ALL TIMES FOR EMERGENCY REPAIRS.

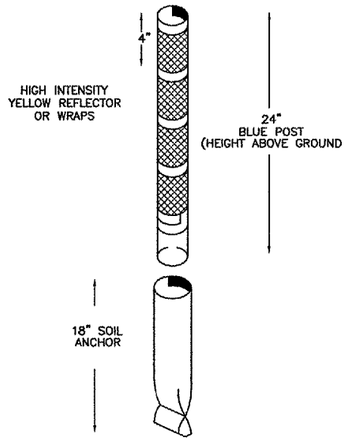


TURF AREA CABLE TRENCH DETAIL

NOT TO SCALE

NOTES

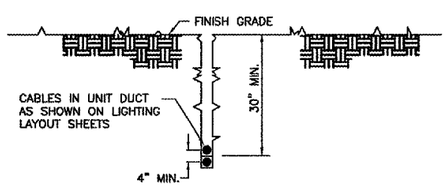
1. TRENCHES WITH MORE THAN 2 CABLES SHALL BE INCREASED 4" IN WIDTH FOR EACH ADDITIONAL CABLE. IF SPECIFIED ON PLANS, TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
2. DEPTH OF TRENCHES SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED ON THE PLANS.
3. SAND BACKFILL SHALL BE USED IF THE EXISTING SOIL DOES NOT MEET THE BACKFILL REQUIREMENTS.
4. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL.



TAXIWAY RETROFLECTIVE MARKER DETAIL

NOT TO SCALE

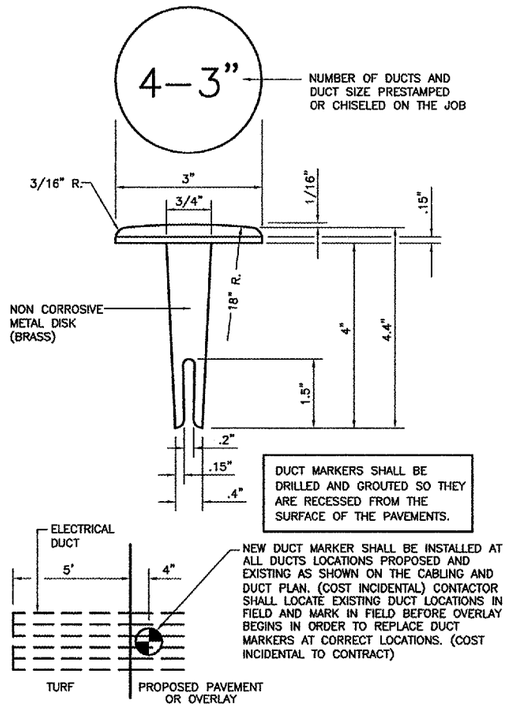
NOTE: RETROFLECTIVE MARKER SHALL BE SAFE-HIT OR APPROVED EQUAL.



CABLE IN UNIT DUCT - PLOWED

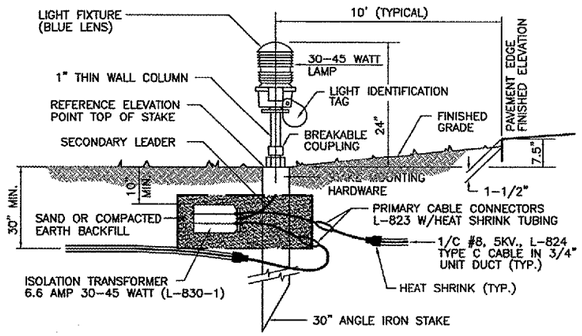
NOT TO SCALE

NOTE: CONTRACTOR SHALL HAVE THE OPTION TO TRENCH OR PLOW UNIT DUCT. NO ADDITIONAL PAYMENT SHALL BE MADE FOR TRENCHING.



DUCT MARKER DETAIL

NOT TO SCALE



PROPOSED/ADJUSTED/RELOCATED STAKE MOUNTED MEDIUM INTENSITY TAXIWAY LIGHT

NOT TO SCALE

GENERAL NOTES:

1. THE VEHICULAR BARRIERS/BOLLARDS WILL NOT BE MEASURED SEPERATELY FOR PAYMENT BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONCRETE UTILITY PAD.
2. LOCATION OF UNDERGROUND ELECTRICAL ITEMS SHALL BE COORDINATED WITH VEHICULAR BARRIERS/BOLLARDS TO AVOID ANY CONFLICTS
3. NUMBER OF BARRIERS/BOLLARDS TO BE INSTALLED SHALL BE AS REQUIRED BY THE UTILITY COMPANY

PATH: K:\0329702\sheets\
FILE: edtl1.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Mon 3/29/04 8:25am

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

ELECTRICAL DETAILS - SHEET 1

CMT
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CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	DKP
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

PATH: K:\0329702\sheets\
FILE: edtl2.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Mon 3/29/04 9:06am

REVISIONS

NUMBER	BY	DATE

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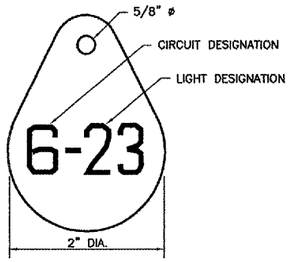
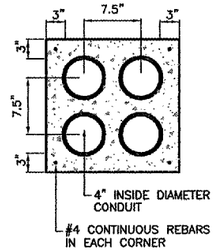


LIGHT IDENTIFICATION DETAIL
NOT TO SCALE

NOTES:

1. INSTALL A NONCORROSIVE DISC OF 2" MINIMUM DIAMETER WITH THE NUMBER PERMANENTLY STAMPED, CUT OUT, OR ENGRAVED UNDER THE HEAD OF THE BASE PLATE BOLT OR ATTACHED TO LIGHT FLANGE WITH A SET SCREW.
2. NUMERALS SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY. ALL EXISTING AND PROPOSED TAXIWAY AND RUNWAY LIGHTS SHALL BE TAGGED AS DIRECTED BY THE RESIDENT ENGINEER. ALL LIGHTS ON EXISTING CIRCUITS THAT HAVE LIGHTING IMPROVEMENTS (PROPOSED OR RELOCATED LIGHTS) SHALL BE RETAGGED.
3. COST OF TAGGING LIGHTS SHALL NOT BE PAID FOR SEPERATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

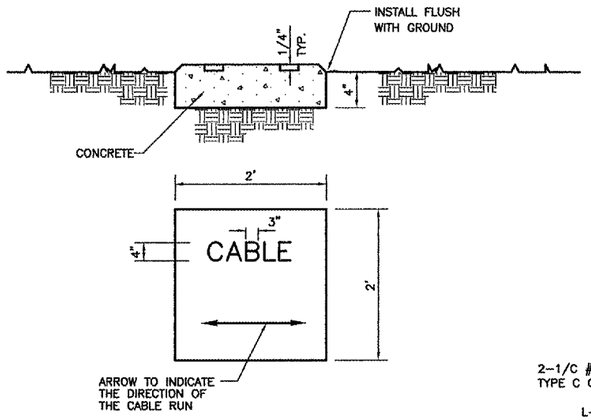


4-WAY

CONCRETE ENCASED DUCT BANKS
NOT TO SCALE

NOTES:

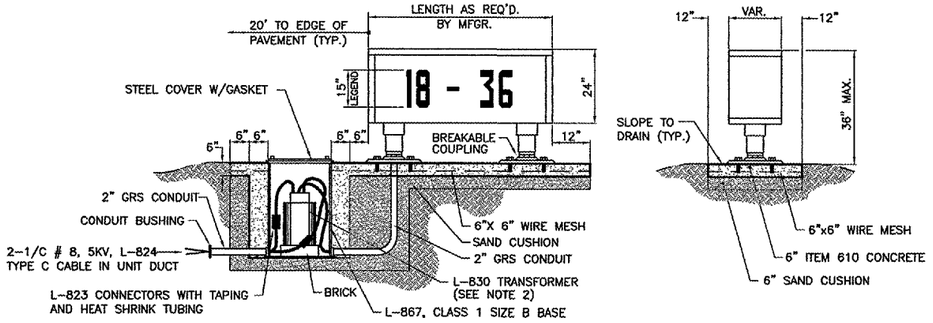
1. DIMENSIONS ARE MINIMUM.
2. CONCRETE SHALL CONFORM TO ITEM 610.
3. ALL CONDUIT SHALL BE SCHEDULE 40 PVC.
4. TOP OF CONCRETE ENCASEMENT IN TURF AREAS SHALL NOT BE LESS THAN 24" BELOW FINISHED GRADE.
5. 4" SPLIT DUCT SHALL BE CONCRETE ENCASED WITH 3" MINIMUM CONCRETE SURROUNDING 4" CONDUIT. COST INCIDENTAL TO SPLIT DUCT.
6. PROVIDE PULL STRING AND CAPS FOR UNUSED DUCTS.



TURF CABLE MARKER DETAIL
NO SCALE

NOTES

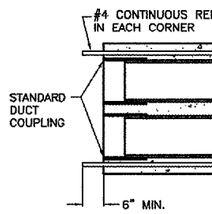
1.) CABLE MARKERS SHALL BE INSTALLED AT ALL BENDS AND EVERY 200' ALONG THE CABLE RUN.
2.) ITEM 610 CONCRETE SHALL BE USED.
3.) ALL EXPOSED EDGES SHALL BE EDGED WITH A 1/4" RADIUS TOOL.
4.) THE COST OF FURNISHING AND INSTALLING NEW MARKERS SHALL BE INCIDENTAL TO THE ASSOCIATED CABLE ITEMS.
5.) 0.049 CU. YD. CONCRETE PER MARKER.
6.) CONTACTOR SHALL LOCATE EXISTING CABLE MARKERS IN THE FIELD BEFORE SHOULDER ADJUSTMENT BEGINS IN ORDER TO REPLACE CABLE MARKERS AT CORRECT LOCATIONS (COST INCIDENTAL TO CONTRACT).



HOLD LINE / TAXIWAY GUIDANCE SIGN L-858, SIZE 2, STYLE 2, CLASS 2
NOT TO SCALE

SIGNAGE NOTES

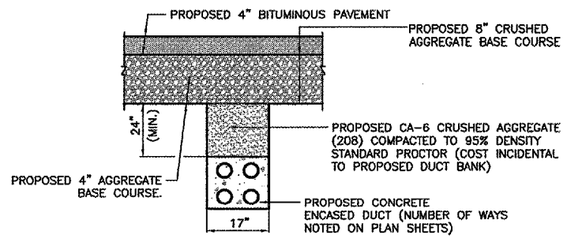
1. ALL SIGNS ARE LUMACURVE 2-SIDED SIGNS BY STANDARD SIGNS OR APPROVED EQUAL.
2. TRANSFORMER WATTAGE AS RECOMMENDED BY MANUFACTURER.
3. LIGHTED SIGNS SHALL BE BASE MOUNTED ONLY.
4. UNIT DUCT SHALL BE TERMINATED IN THE CAN AND SEALED TO THE CABLE WITH HEAT SHRINK AS SPECIFIED.
5. THE NUMBER OF MODULES PER SIGN SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
6. CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWING INCLUDING SIGN, COLOR, SIZE AND PROPOSED LEGEND, IN ENOUGH DETAIL AND DETERMINE PROPOSED SPACING AND OTHER INFORMATION REQUIRED BY SPECIAL PROVISIONS. CONTRACTOR TO VERIFY PROPOSED SIGN LOCATIONS AND ORIENTATIONS WITH RESIDENT ENGINEER PRIOR TO INSTALLATION.
7. WHEN EXISTING SIGNS ARE PROPOSED TO BE RETROFITTED WITH NEW SIGN PANELS, THE SIGN PANELS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF ADVISORY CIRCULAR 15015340-18 (LATEST EDITION). THE CONTRACTOR SHALL VERIFY THAT THE PROPOSED SIGN PANELS ARE COMPATIBLE WITH THE EXISTING SIGN ASSEMBLIES WHICH ARE LUMACURVE BY STANDARD SIGNS.



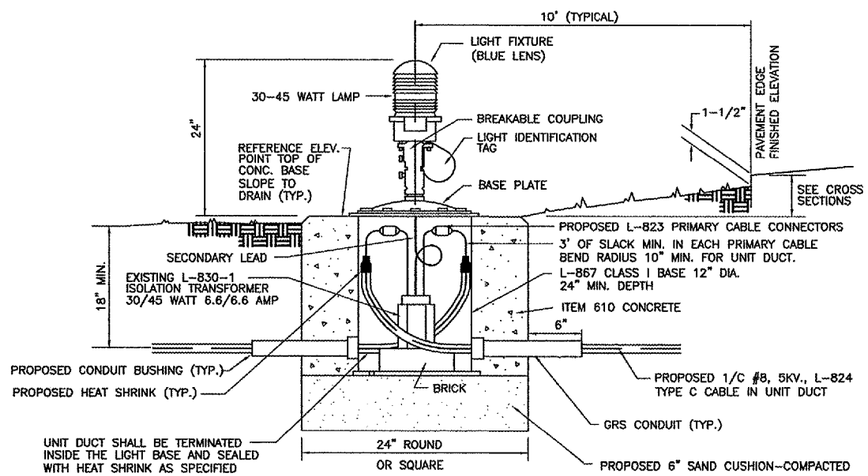
CONCRETE ENCASED DUCT END DETAIL
NO SCALE

GERERAL NOTES:

1. THE CONCRETE BASE FOR BASE MTD. LIGHTS SHALL BE TROWEL FINISHED WITH A 45° BEVELED EDGE. SLOPE TO DRAIN (610).
2. TRANSFORMER HOLDER SHALL BE ANY COMMERCIALLY AVAILABLE BRICK.
3. BREAKING GROOVE COUPLINGS SHALL NOT BE OVER 1" ABOVE GROUND LINE.
4. ISOLATION TRANSFORMERS COME WITH A FACTORY INSTALLED PLUG (TYPE 1, CLASS A, STYLE 2) AND RECEPTACLE (TYPE 1, CLASS A, STYLE 9). A TYPE 1, CLASS B, STYLE 3 PLUG AND TYPE 1, CLASS B, STYLE 10 RECEPTACLE SHALL BE INSTALLED ON THE 1/C, No. 8, 5000 V., L-824 TYPE C CABLES FOR CONNECTION TO EACH TRANSFORMER.
5. TO FURTHER REDUCE THE POSSIBILITY OF WATER/MOISTURE ENTRANCE INTO THE CONNECTOR BETWEEN THE CABLE AND THE FIELD ATTACHED CONNECTOR, IT IS REQUIRED THAT A HEAT SHRINKABLE TUBING WITH INTERNAL ADHESIVE BE APPLIED OVER THE ENTIRE CABLE CONNECTOR.
6. ALL SIGNS, LIGHTS, CABLES AND TRANSFORMERS TO BE REMOVED SHALL REMAIN THE PROPERTY OF THE AIRPORT. AT THE DISCRETION OF THE AIRPORT MANAGER, THE CONTRACTOR MAY BE REQUIRED TO DISPOSE OF THESE MATERIALS OFFSITE AT NO ADDITIONAL COST.
7. TAXIWAY LIGHTS SHALL HAVE A BLUE LENS, RUNWAY LIGHTS SHALL HAVE A CLEAR OR 180° AMBER/CLEAR LENS AS DESIGNATED ON PLANS.
8. DUCT MARKERS SHALL BE INSTALLED AT EVERY NEW DUCT AND AT EVERY EXISTING DUCT USED FOR THIS PROJECT.
9. CONTRACTOR SHALL HAVE THE OPTION TO TRENCH OR PLOW UNIT DUCT. NO ADDITIONAL PAYMENT SHALL BE MADE FOR TRENCHING.



CONCRETE ENCASED DUCT BACKFILL
NOT TO SCALE



PROPOSED/ADJUSTED/RELOCATED BASE MOUNTED MEDIUM INTENSITY TAXIWAY LIGHT
NOT TO SCALE

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

ELECTRICAL DETAILS - SHEET 2

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DESIGN BY:	DKP
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CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

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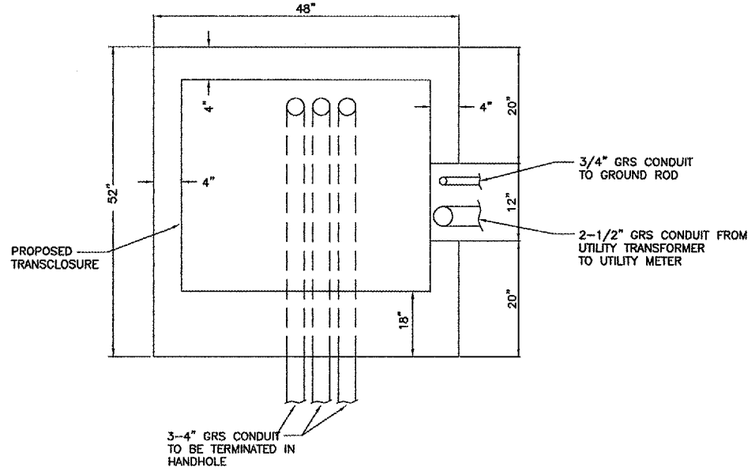
UPDATE BY: charper
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Tue 2/22/05 10:08am

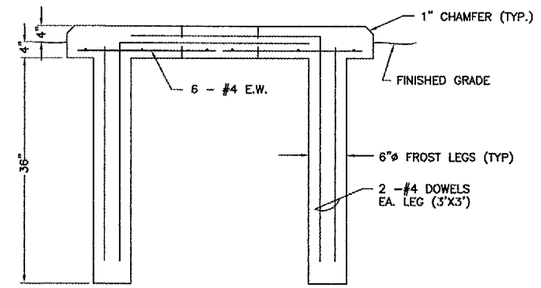
LIGHTING PANEL SCHEDULE			
CIRCUIT NO.	POLE NO.	CIRCUIT BREAKER SIZE	USAGE
		200A	MAIN CIRCUIT BREAKER
A–1	1,3	20A	ELECTRIC GATE
A–2	2,4	20A	PARKING LOT LIGHTING
A–3	5	20A	RECEPTACLE
A–4	6	15A	LIGHT INSIDE CABINET
A–5	7	15A	TIMECLOCK

NOTES

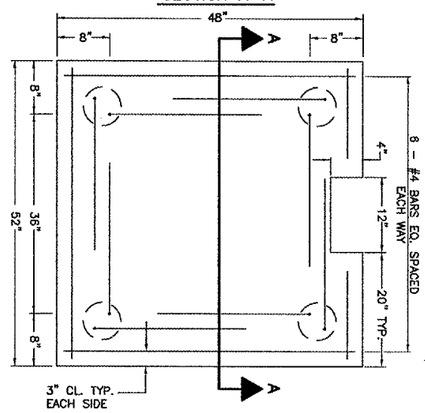
1. UTILITY METER. THE NEW ELECTRIC SERVICE SHALL BE 200 AMP, 120/240 VOLT, 1 PHASE, 3–WIRE 60 HZ SERVICE. UTILITY METER SHALL BE INSTALLED ON THE SIDE OF TRANSCLOSURE. CONTRACTOR SHALL SUPPLY THE BASE FOR METER AND COORDINATE SERVICE CONNECTION WITH UTILITY COMPANY.
2. 30 CIRCUIT LIGHTING PANEL WITH 200 AMP 2–POLE MAIN CIRCUIT BREAKER.
3. 8 CIRCUIT PROGRAMMABLE TIMECLOCK, MODEL NO. ET70815CR AS MANUFACTURED BY INTERMATIC OR EQUAL.
4. 42"x36"x8" JUNCTION BOX HOUSING FOR TIMECLOCK AND CONTACTORS.
5. GROUND ROD SHALL BE 3/4" DIA. x 10'–0" COPPER CLAD. ALL CONNECTIONS TO GROUND ROD SHALL BE ONE–SHOT EXOTHERMIC TYPE.
6. 30A, 2–POLE LIGHTING CONTACTOR. (TYP. OF 3)



PLAN VIEW



SECTION A–A

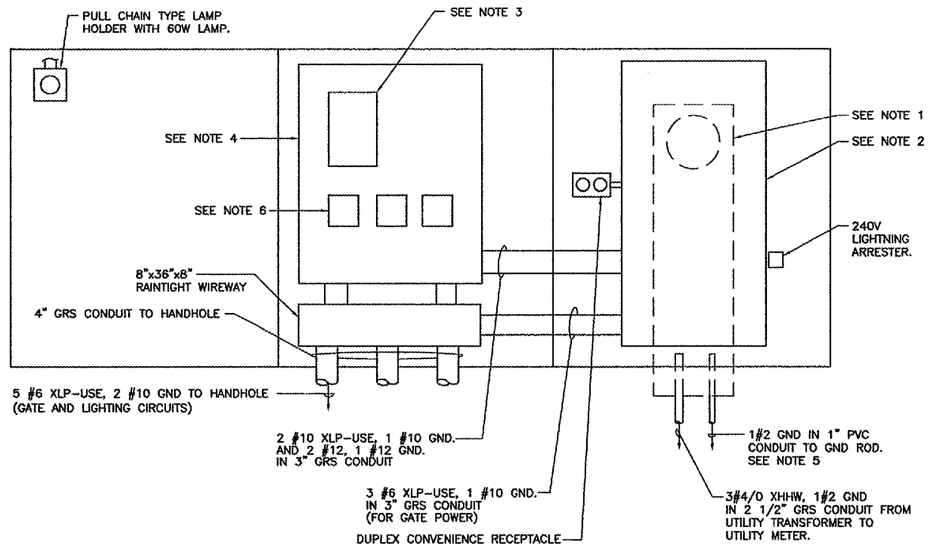


PLAN VIEW

CONCRETE PAD FOR ELECTRICAL TRANSCLOSURE

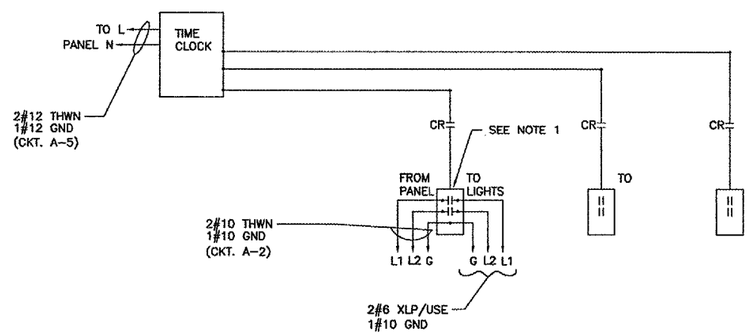
NOT TO SCALE

1) CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH AT 14 DAYS OF 3500 PSI
2) REINFORCING STEEL SHALL BE A–615 GRADE 60
3) ALL EXPOSED EDGES AND EQUIPMENT PADS SHALL BE CHAMFERED 1"
4) CONTRACTOR SHALL INSTALL CONDUITS THROUGH PAD AS REQUIRED. CONDUITS NOT SHOWN FOR CLARITY.
5) DIMENSIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED.



ELECTRICAL TRANSCLOSURE DETAIL

NOT TO SCALE



NOTES:

1. 2 POLE, 30 AMP LIGHTING CONTACTOR. (TYP. OF 3)

LIGHTING CONTROLLER WIRING SCHEMATIC

NOT TO SCALE

REVISIONS		
NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

ELECTRICAL DETAILS - SHEET 3

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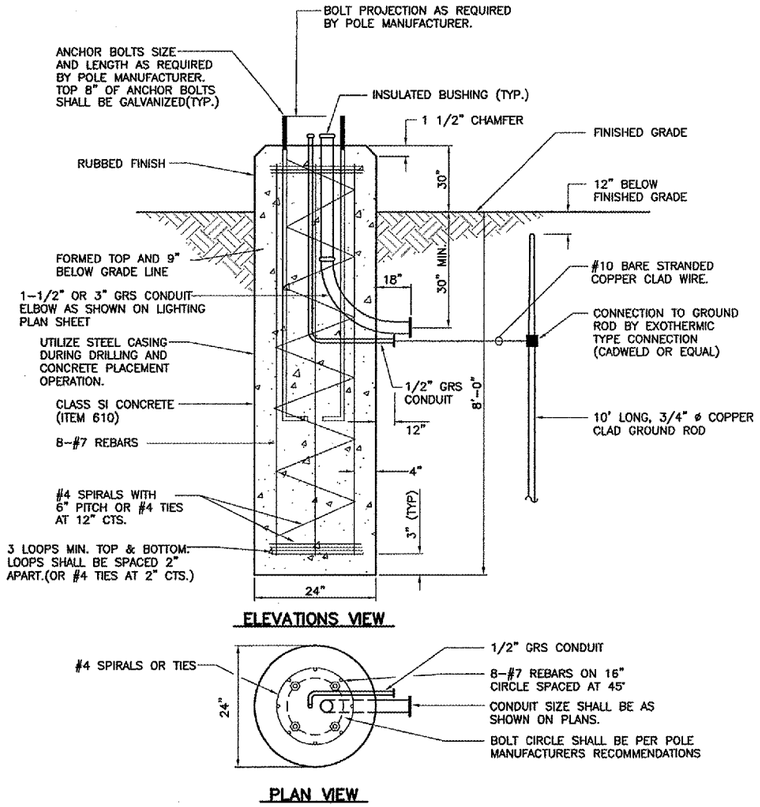
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297–02

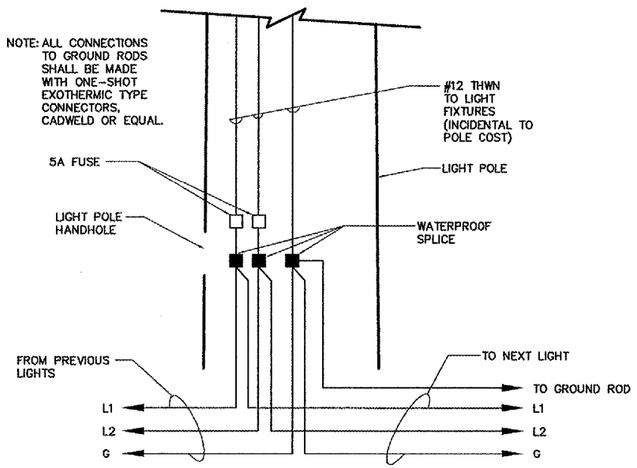
IL PROJECT: IGQ–3329
A.I.P. PROJECT: 3–17–0121–B21



LIGHT POLE FOUNDATION DETAIL

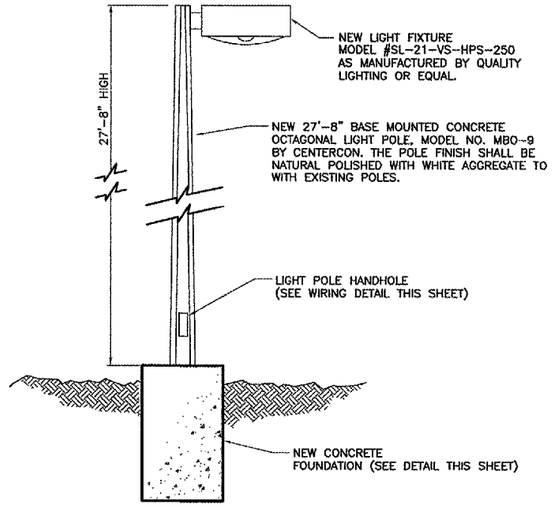
NOT TO SCALE

*CONTRACTOR TO VERIFY FINISHED GRADE WITH ENGINEER



LIGHT POLE HANDHOLE WIRING DIAGRAM

NOT TO SCALE



PROPOSED LIGHT POLE DETAIL

NOT TO SCALE

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UPDATE BY: charper
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Tue 2/22/05 10:12am

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NUMBER	BY	DATE

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LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

ELECTRICAL DETAILS - SHEET 4

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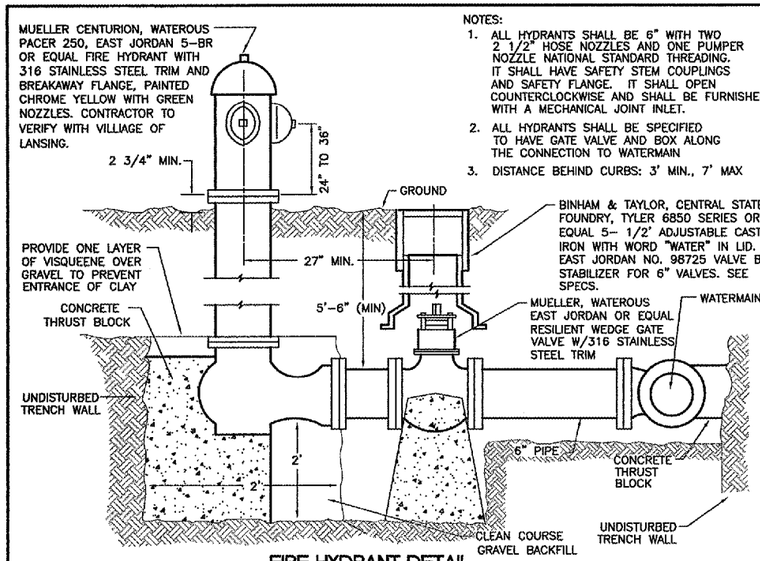
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

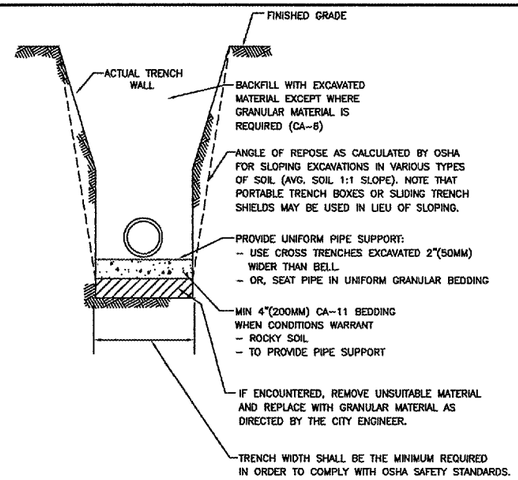


NOTES:

1. ALL HYDRANTS SHALL BE 6" WITH TWO 2 1/2" HOSE NOZZLES AND ONE PUMPER NOZZLE NATIONAL STANDARD THREADING. IT SHALL HAVE SAFETY STEM COUPLINGS AND SAFETY FLANGE. IT SHALL OPEN COUNTERCLOCKWISE AND SHALL BE FURNISHED WITH A MECHANICAL JOINT INLET.
2. ALL HYDRANTS SHALL BE SPECIFIED TO HAVE GATE VALVE AND BOX ALONG THE CONNECTION TO WATERMAIN
3. DISTANCE BEHIND CURBS: 3' MIN., 7' MAX

FIRE HYDRANT DETAIL

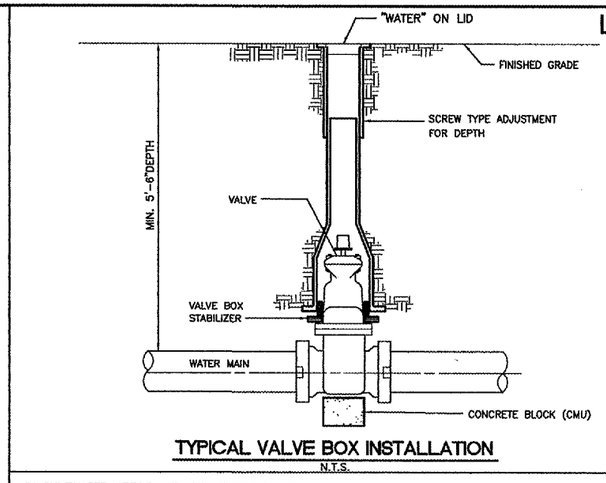
N.T.S.



WATERMAIN EMBEDMENT DETAIL

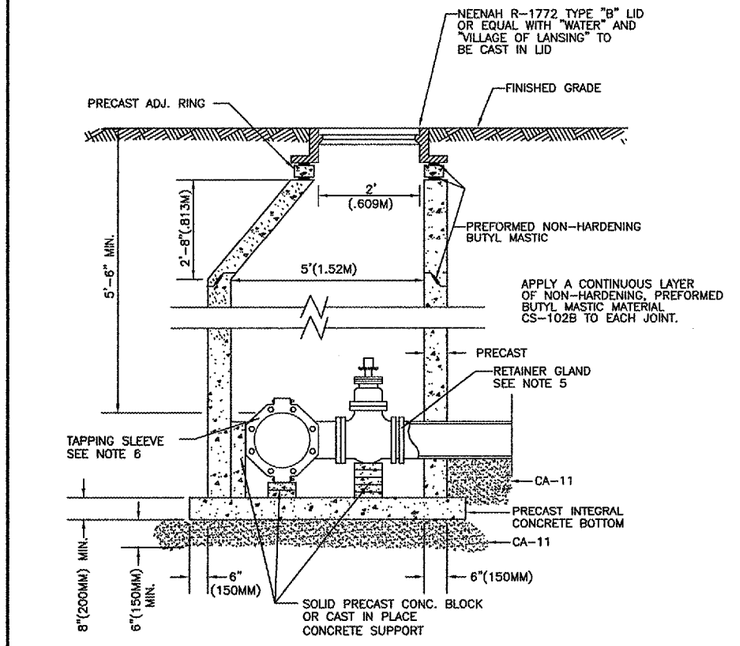
N.T.S.

IN PAVED AREAS ALL TRENCHES SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 701.-3.7 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS.



TYPICAL VALVE BOX INSTALLATION

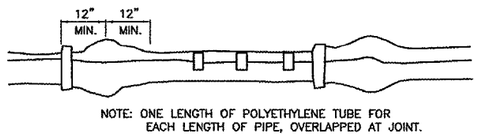
N.T.S.



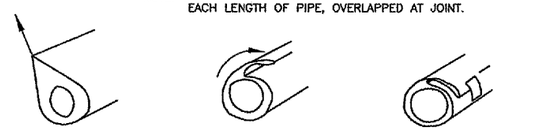
1) NO MORE THAN 12"(300MM) OF ADJUSTING RINGS MAY BE USED: HOWEVER NO MORE THAN ONE 2"(50MM) ADJUSTING RING OR TWO RINGS IN TOTAL MAY BE USED.
2) VALVE SHALL ALIGN WITH THE CENTER OF VAULT OPENINGS.
3) CONES SHALL BE ECCENTRIC.
4) WHEN ADJUSTMENTS ARE NECESSARY, THEY WILL BE PERFORMED WITH A MAXIMUM OF TWO (2) PRECAST CONCRETE RINGS SET IN A BED OF PREFORMED NON-HARDENING MASTIC (CS-102B OR APPROVED EQUAL) TO A MAXIMUM HEIGHT OF 12"(300MM). (ONE 2"(50MM) RING MAX.)
5) TYLER OR MUELLER CLASS 350 MECHANICAL JOINT WITH MEGALUGS OR EQUAL.
6) TAPPING SLEEVES SHALL BE HEAVY-DUTY STAINLESS STEEL BY MUELLER OR EQUAL.

TAPPING VALVE AND VAULT

N.T.S.



NOTE: ONE LENGTH OF POLYETHYLENE TUBE FOR EACH LENGTH OF PIPE, OVERLAPPED AT JOINT.



TAKE UP SLACK IN THE TUBE ALONG THE BARREL OF THE PIPE TO MAKE A SNUG, BUT NOT TIGHT, FIT.

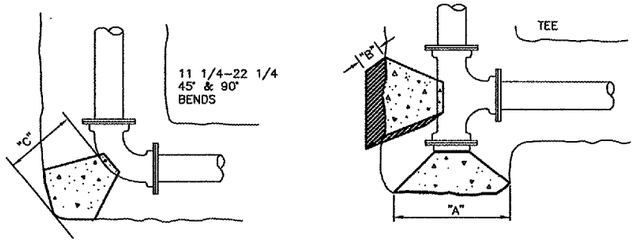
FOLD EXCESS POLY-ETHYLENE BACK OVER THE TOP OF THE PIPE

SECURE THE FOLD AT SEVERAL LOCATIONS ALONG THE PIPE BARREL (APPROX. EVERY THREE FEET).

POLYETHYLENE ENCASEMENT

N.T.S.

NOTE: REPAIR ALL SMALL RIPS, TEARS OR OTHER TUBE DAMAGE WITH ADHESIVE TAPE.



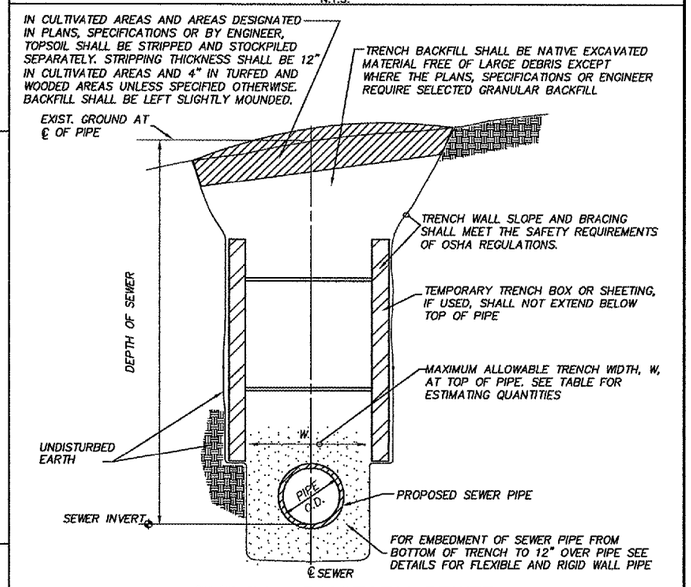
THRUST BLOCK DETAIL

N.T.S.

NOTES:

1. ALL BENDS, TEES, PLUGS, FITTINGS OR OTHER SIGNIFICANT CHANGES SHALL BE BRACED WITH POURED CONCRETE THRUST BLOCKS AS SHOWN ON THIS DETAIL.
2. DIMENSIONS A, B, C APPLY TO ALL BEND CONDITIONS SHOWN.
3. ALL B & C DIMENSIONS TO BE AS REQUIRED TO REACH UNDISTURBED EARTH BUT NOT LESS THAN LISTED ON THRUST BLOCK TABLE.
4. ALL POURED CONCRETE SHALL BE 3500 P.S.I. @ 14 DAYS.
5. INSTALL PLUGS AT ALL RUNS OR BRANCHES DISCONTINUED FOR FUTURE SERVICE.
6. WHEN POURING AGAINST PLUGS AND BLIND FLANGES, SET A PIECE OF 3 MIL PLASTIC AGAINST FITTINGS TO KEEP CONCRETE OFF BOLTS.

SIZE	90° BEND			45° BEND			22-1/2° BEND			11-1/4° BEND			TEE OR PLUG		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
6"	2'-3"	1'-2"	8"	1'-3"	1'-2"	8"	0'-8"	1'-2"	8"	0'-6"	1'-2"	7"	1'-8"	1'-2"	8"
8"	3'-7"	1'-4"	9"	2'-3"	1'-4"	9"	1'-4"	1'-4"	9"	0'-7"	1'-4"	8"	3'-2"	1'-4"	9"
10"	5'-0"	1'-6"	10"	2'-8"	1'-6"	10"	1'-5"	1'-6"	10"	0'-8"	1'-6"	8"	3'-6"	1'-6"	10"
12"	5'-10"	1'-10"	1'-0"	3'-2"	1'-10"	11"	1'-10"	1'-8"	11"	0'-8"	1'-8"	8"	4'-2"	1'-0"	1'-10"



TYPICAL SANITARY SEWER AND WATERMAIN INSTALLATION

N.T.S.

QUANTITIES PER LINEAL FOOT OF CONDUIT

INSIDE DIAMETER OF CONDUIT IN INCHES "D"	MAXIMUM TRENCH WIDTH IN FEET	BEDDING C.Y./FOOT WHERE ELIGIBLE	HAUNCHING C.Y./FOOT WHERE ELIGIBLE	INITIAL BACKFILL C.Y./FOOT WHERE ELIGIBLE	FINAL BACKFILL C.Y./FOOT PER FOOT	PERMANENT PAVEMENT REMOVAL AND REPLACEMENT S.Y./FOOT
6	3.58	0.04	0.03	0.17	0.13	0.62
8	3.78	0.05	0.05	0.19	0.14	0.64
10	3.97	0.05	0.06	0.20	0.15	0.66
12	4.17	0.05	0.07	0.22	0.15	0.69
14	4.36	0.05	0.08	0.24	0.16	0.71
15	4.46	0.06	0.09	0.25	0.17	0.72
16	4.56	0.06	0.10	0.26	0.17	0.73
18	4.75	0.06	0.11	0.29	0.18	0.75
20	4.94	0.06	0.12	0.31	0.18	0.77
21	5.04	0.06	0.13	0.32	0.19	0.78
24	5.33	0.07	0.15	0.35	0.20	0.81
27	5.63	0.07	0.17	0.38	0.21	0.85
28	5.72	0.07	0.18	0.39	0.21	0.86
30	5.92	0.07	0.20	0.41	0.22	0.88
33	6.21	0.08	0.22	0.45	0.23	0.91
36	6.50	0.08	0.24	0.48	0.24	0.94

BASED ON STANDARD DRAWING NO. 2 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS.

TABLE OF QUANTITIES FOR ESTIMATING PURPOSES

LA034

PATH: K:\0329702\sheets\
FILE: waterdtl.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Fri 3/26/04 2:56pm

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

WATERMAIN DETAILS

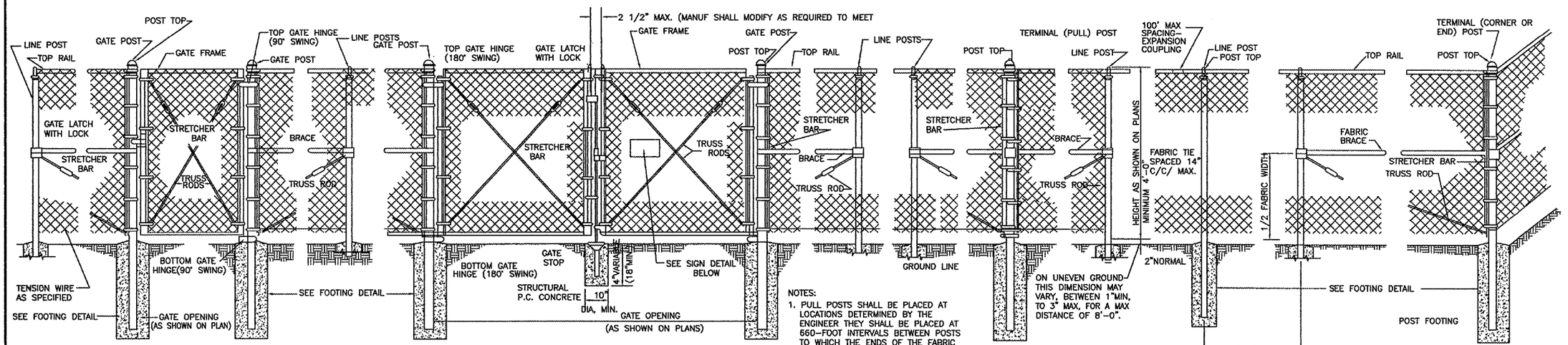
CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SHEET 26 OF 50 SHEETS



PEDESTRIAN GATE ARRANGEMENT

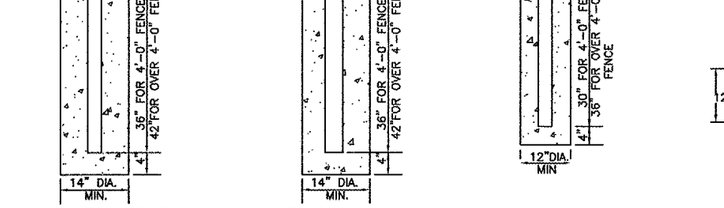
VEHICLE GATE ARRANGEMENT

NOTES:
1. PULL POSTS SHALL BE PLACED AT LOCATIONS DETERMINED BY THE ENGINEER THEY SHALL BE PLACED AT 660-FOOT INTERVALS BETWEEN POSTS TO WHICH THE ENDS OF THE FABRIC ARE CLAMPED OR MIDWAY BETWEEN SUCH POSTS WHEN THE DISTANCE IS LESS THAN 1320' AND GREATER THAN 660'
2. WHERE FENCE HAS A CHANGE IN DIRECTION OF 15° OR MORE, A TERMINAL POST SHALL BE PLACED AS SHOWN ABOVE.

PULL POST ARRANGEMENT

LINE POST ARRANGEMENT

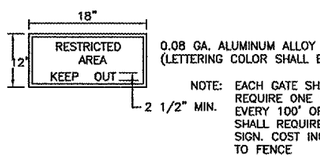
CORNER OF END POST ARRANGEMENT



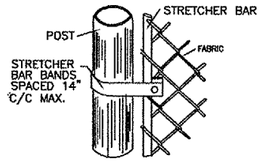
FOOTING FOR TERMINAL POST

FOOTING FOR GATE POST

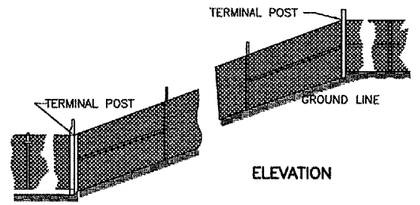
FOOTING FOR LINE POST



SIGN DETAIL

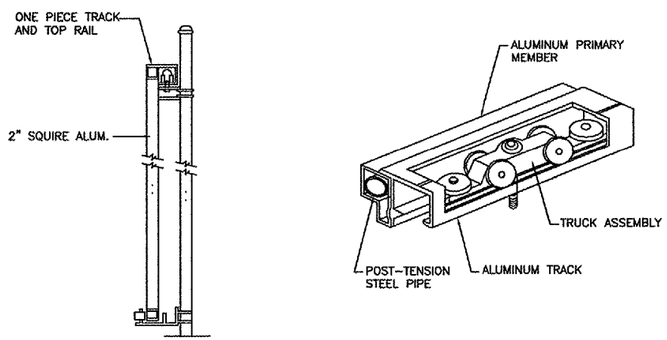


METHOD OF FASTENING STRETCHER BAR TO POST



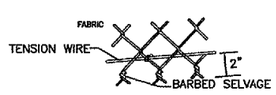
ELEVATION

FENCE INSTALLATION ON SLOPES

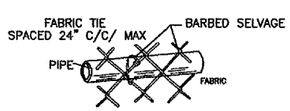


ROLLER ASSEMBLY FOR SLIDING DRIVEWAY GATE

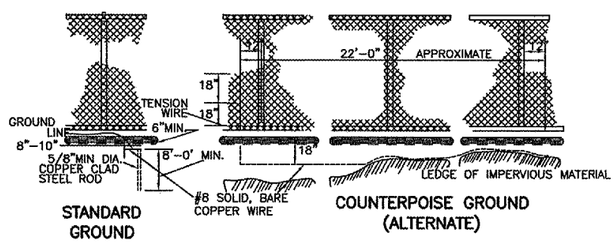
NOTE: GATE AND ROLLERS SHALL BE MOUNTED INBOARD
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ENCLOSED TRUCK ROLLER ASSEMBLY FOR SLIDING DRIVEWAY GATES.



METHOD OF TYING FABRIC TO TENSION WIRE



METHOD OF TYING FABRIC TO PIPE



STANDARD GROUND

COUNTERPOISE GROUND (ALTERNATE)

PROTECTIVE ELECTRICAL GROUND

NOTES:
1. CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 1000' EXCEPT THERE SHALL BE A GROUND NOT EXCEEDING 100 FT. FROM A GATE IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE.
2. FENCE UNDER POWER LINE SHALL BE GROUNDED BY THREE GROUNDS, ONE DIRECTLY UNDER THE CROSSING AND ONE ON EACH SIDE 25 TO 50 FT. AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING.
3. THE COUNTERPOISE SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD BECAUSE OF AN IMPERVIOUS EARTH STRUCTURES.
4. THE GROUND WIRE SHALL BE CONNECTED TO FABRIC, TENSION WIRE, AND THE GROUND ROD BY A MECHANICAL CLAMP OF CAST BRONZE BODY AND BRONZE OR STAINLESS STEEL BOLTS AND WASHERS.

PATH: K:\0329702\draw\sheets\
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UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Tue 3/23/04 9:50am

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

FENCING DETAILS

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
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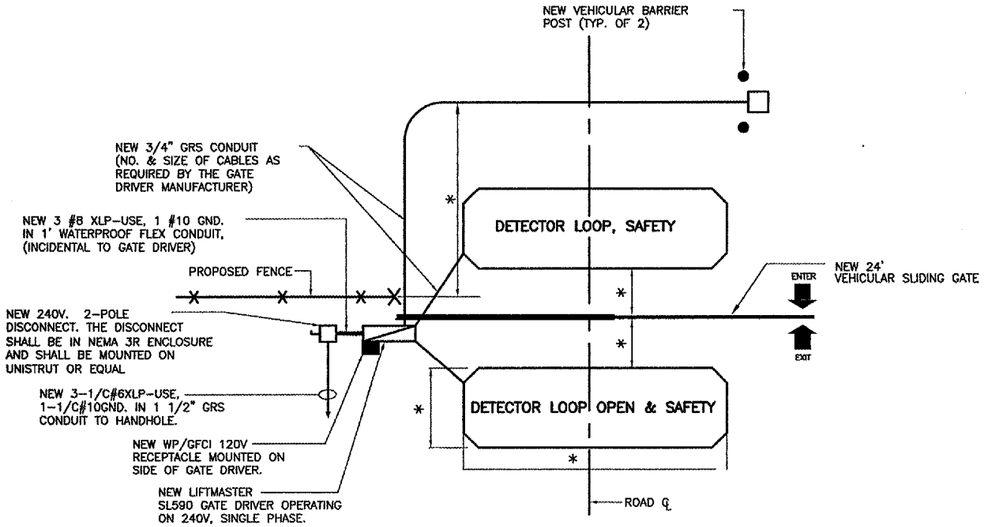
DATE:	03/04/05
JOB No:	03297-02

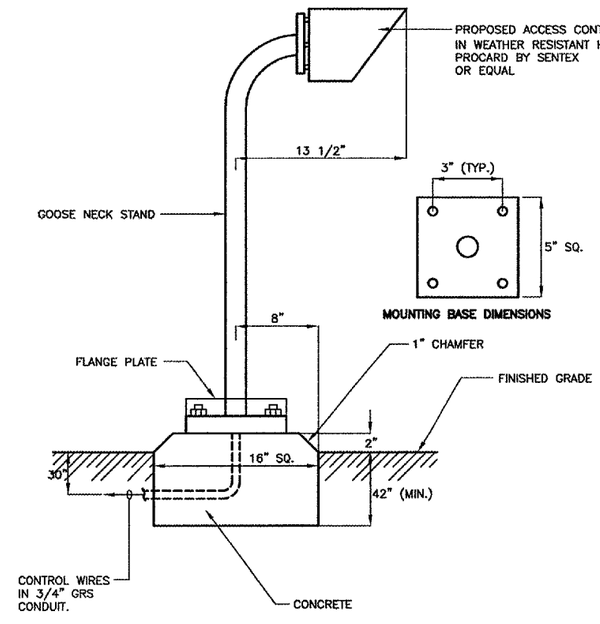
IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21



NEW KEY PAD OPERATED GATE AND DETECTOR LOOP LAYOUT

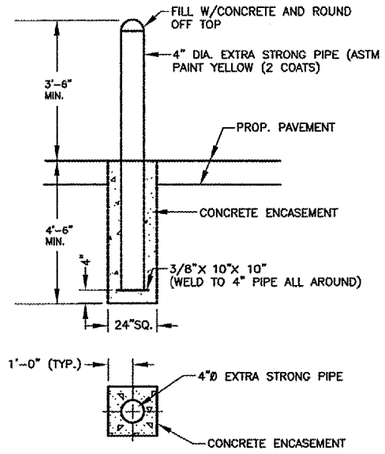
NOT TO SCALE

* PER MANUFACTURERS RECOMENDATION CONTRACTOR SHALL COORDINATE THIS WORK WITH ENGINEEER.



ACCESS CONTROL PAD MOUNTING DETAIL

NOT TO SCALE



VEHICULAR BARRIER DETAIL

NOT TO SCALE

NOTES:

1. THE VEHICULAR BARRIERS WILL NOT BE MEASURED SEPARATELY FOR PAYMENT BUT SHALL BE CONSIDERED INCIDENTAL TO ELECTRIC GATE.
2. LOCATION OF UNDERGROUND ELECTRICAL ITEMS SHALL BE COORDINATED WITH VEHICULAR BARRIERS TO AVOID ANY CONFLICTS.
3. CONTRACTORS SHALL INSTALL TWO VEHICULAR BARRIERS ADJACENT TO THE GATE OPERATOR AND TWO VEHICULAR BARRIERS ADJACENT TO ACCESS CONTROL PAD.

NOTES:

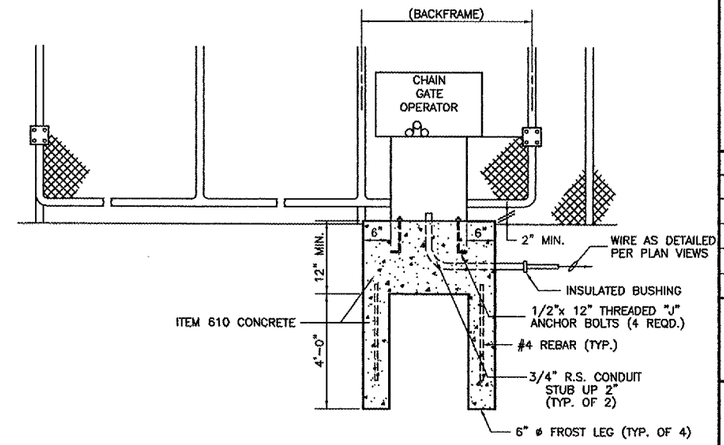
1. THE LOCATION OF THE NEW GATE DRIVER, DISCONNECT AND DETECTOR LOOPS ARE FOR INFORMATION ONLY AND SHALL BE FIELD ADJUSTED PER THE MANUFACTURER RECOMMENDATION.
2. THE MINIMUM BURIAL DEPTH FOR GRS CONDUIT IS 30" BELOW FINISHED GRADE.
3. NO DIRECT BURIED CABLE WILL BE ALLOWED IN THE INSTALLATION OF THE NEW GATE DRIVER.

	GATE TYPE	GATE
A	DISTANCE BETWEEN GATE POSTS (INSIDE FACE TO INSIDE FACE)	24'-0"
B	DISTANCE BETWEEN HANGER POSTS (CENTER TO CENTER)	10'-0"*
C	OVERALL GATE LENGTH	34'-6"*
D	OVERALL GATE HEIGHT	6'-0"
E	HEIGHT OF FABRIC IN GATE	5'-0"
F	COUNTER BALANCE LENGTH	10-6"
G	HEIGHT OF 4" POSTS ABOVE GRADE	6'-6"*

* OR AS RECOMMENDED BY MFG.

NOTES:

1. CANTILEVERED GATE SHALL BE SUFFICIENTLY RIGID TO WITHSTAND FLEXING OR BENDING DURING WINDY CONDITIONS. CONTRACTOR SHALL PROVIDE STIFFENERS, STRUCTURAL SHAPES IN EXCESS OF THE MINIMUM SPECIFIED DIMENSIONS OR ADDITIONAL ROLLERS AND POSTS SUFFICIENT TO PREVENT DISPLACEMENT OF THE GATE BY WIND OR BY UNAUTHORIZED PERSONNEL.
2. CONTRACTOR SHALL INSTALL GATE AS A COMPLETE WORKING UNIT. THE GATE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE GATE, CHAIN GATE OPERATOR AND FOUNDATION, AND POWER CABLES CONDUIT, TRENCHING, CIRCUIT BREAKERS AND ALL CONNECTIONS, LABOR AND MATERIALS NECESSARY TO COMPLETE OPERATION.
3. LOCATION OF THE GATE OPERATOR SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
4. THE FABRIC TYPE AND FINISH OF THE GATE SHALL MATCH WITH THE NEW FENCE OR AS DIRECTED BY THE ENGINEER.
5. ALL NEW SLIDING VEHICULAR GATES SHALL HAVE ENCLOSED TRUCK ASSEMBLIES, SAFE-GLIDE BY EDKO OR EQUAL.



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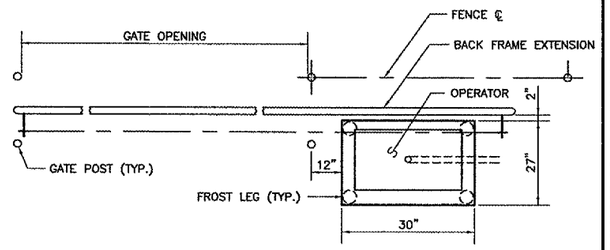
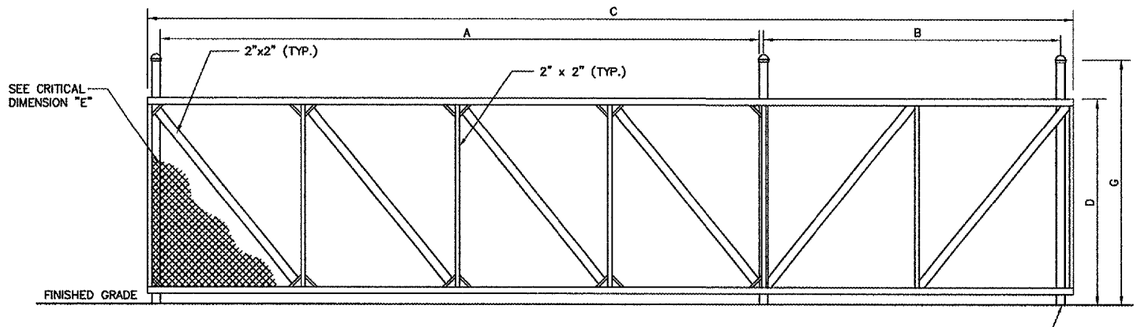


PLAN

GATE OPERATOR DETAIL

NOT TO SCALE



ELEVATION

CANTILEVER SLIDE GATE

NOT TO SCALE

LOCATIONS, DETAILS AND CHARACTER OF EQUIPMENT SHOWN ON THIS SHEET ARE GENERIC. EQUIPMENT LOCATIONS SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.

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UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Mon 3/29/04 8:15am

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

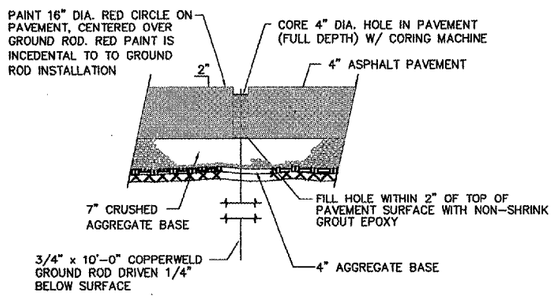
ELECTRIC GATE DETAILS

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

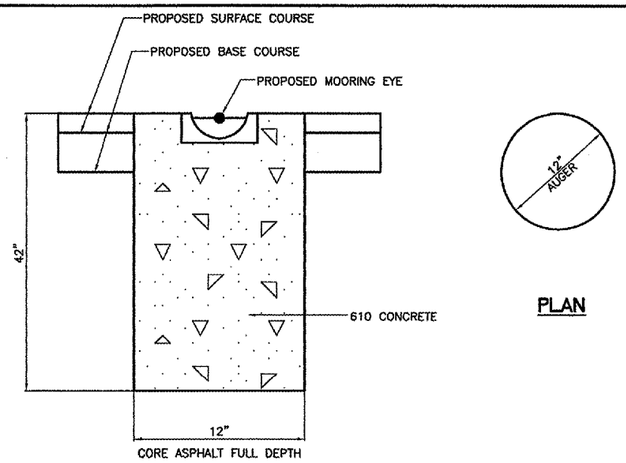
Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-821

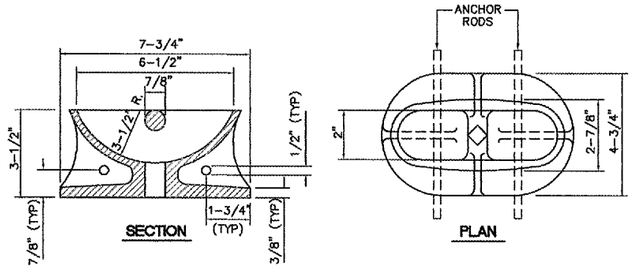


GROUND ROD DETAIL
N.T.S.



SECTION

MOORING EYE INSTALLATION DETAIL

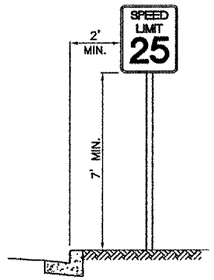


MOORING EYE DETAIL
N.T.S.

NOTES

1.) MOORING CASTINGS SHALL BE NEENAH SEMI-STEEL AIRPORT MOORING EYE CATALOG NO. R3490 OR APPROVED EQUIVALENT.

2.) ANCHOR RODS TO BE NO. 3 DEFORMED REINFORCING STEEL 15" LONG AND SHALL BE BENT DOWNWARD AT 45°.

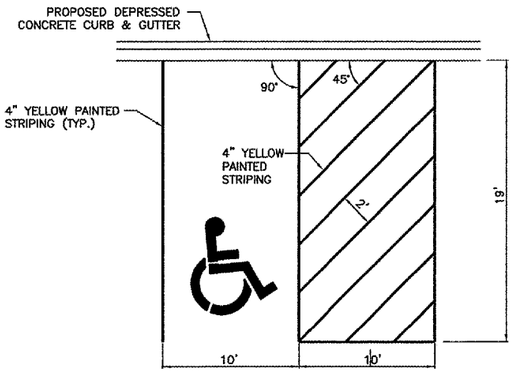


POST MOUNTED SIGN LOCATION DETAIL
NO SCALE

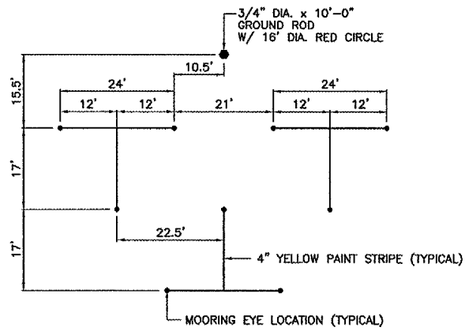
SIGN LEGEND
NO SCALE

NOTE: 1. ALL SIGNS ARE STANDARD MATERIALS, COLORS AND LETTER STYLE AND SIZE AS SHOWN IN THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", 2001 EDITION.

2. SIGN R7-1101 ($100 FINE) TO BE INSTALLED UNDER ALL SIGNS R7-8. (COST INCIDENTAL)



HANDICAP PARKING STALL STRIPING DETAIL
NO SCALE



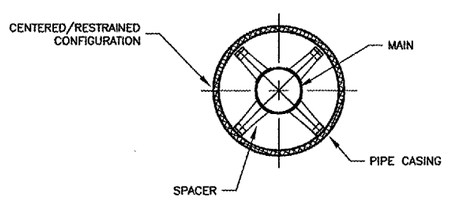
TIEDOWN DETAIL
NO SCALE

BARRIER CURB, DEPRESSED CURB AND CURB AND GUTTER TYPE B-6.12 NOTES

1. CONTRACTION JOINTS SHALL BE PLACED AT TEN (10) FOOT MINIMUM ON CENTERS AND SHALL BE SAW CUT TO MINIMUM DEPTH OF TWO (2) INCHES FROM FRONT TO BACK AS SOON AS THE CONCRETE IS SUFFICIENTLY CURED TO ALLOW CUTTING. AS A MAXIMUM, THE CURB SHALL BE SAWED WITHIN TWENTY-FOUR (24) HOURS OF CONCRETE PLACEMENT. CONTRACTION JOINTS SHALL BE FILLED WITH GRAY NP1 OR EQUIVALENT.
2. EXPANSION JOINTS SHALL BE CONSTRUCTED AT A 50' MAXIMUM SPACING.
3. ALL CURBS SHALL BE CURED AND PROTECTED TO THE REQUIREMENTS OF ARTICLE 606 OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION. MEMBRANE CURING WITH W.R. MEADOWS CS 309, OR APPROVED EQUAL, WILL BE ALLOWED WITH A WHITE FUGITIVE DYE, AS PER TYPE II MEMBRANE CURING.
4. CURB AND GUTTER SHALL HAVE A LIGHT BROOM FINISH.
5. EXPANSION JOINTS SHALL ALSO BE PLACED AT ALL POINTS OF CURVATURE, AT 5' EACH SIDE OF ALL DRAINAGE STRUCTURES, AT THE END OF THE DAYS POUR, OR AS DIRECTED BY THE ENGINEER.
6. TWO (2) NO. 5 REBARS (TEN) 10' LONG SHALL BE PLACED ON EITHER SIDE OF ALL PROPOSED UTILITY TRENCHES.
7. THREE (3) NO. 5 REBARS SPACED 5" APART SHALL BE PLACED THE LENGTH OF ALL DEPRESSED CURB.

SIDEWALK RAMPS

1. SIDEWALK RAMPS ACCESSIBLE TO THE DISABLED SHALL BE PROVIDED AT ALL LOCATIONS WHERE THE FUTURE SIDEWALK MEETS THE PROPOSED CURB AND GUTTER AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 424 OF THE STANDARD SPECIFICATIONS AND STANDARD 424001. THIS WORK SHALL BE PAID FOR AS PORTLAND CEMENT CONCRETE SIDEWALK.



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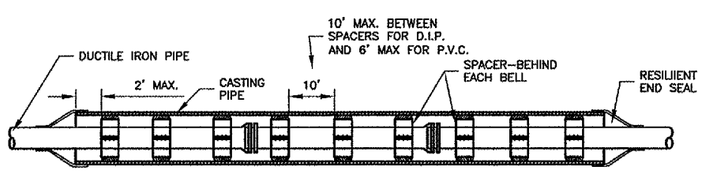
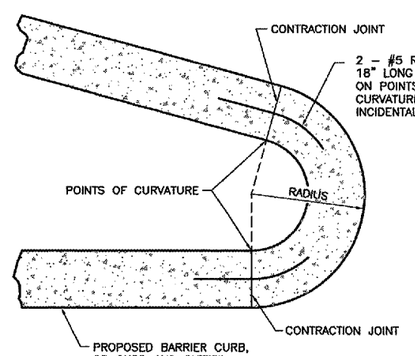
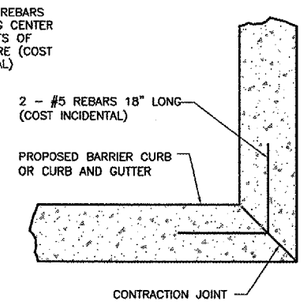


CASING SPACER DETAIL



ISLAND RADII REINFORCEMENT DETAIL
N.T.S.

INSTALL TIE BARS IN LIEU OF DOWEL BARS WHEN RADII ARE 7.5' AND LESS.



CORNER REINFORCEMENT DETAIL
N.T.S.

REINFORCEMENTS SHALL BE INSTALLED AT ALL CORNERS.

PATH: K:\9925602\draw\bid\
FILE: miscdet.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Thu 6/1/00 3:43pm

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

MISCELLANEOUS DETAILS

CMT
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JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

LA034

EXISTING 2 LF OF 12" RCP PIPE REMOVAL

EXISTING CABLE TO BE ABANDONED IN PLACE

SEE NOTE 2

EXISTING 11 SY OF FULL DEPTH BITUMINOUS PAVEMENT REMOVAL

EXISTING CABLE TO BE ABANDONED IN PLACE

EXISTING 16.5 SY OF FULL DEPTH BITUMINOUS PAVEMENT REMOVAL

SEE NOTE 3

1' (TYPICAL)

TAXIWAY G3

TAXIWAY G2

RUNWAY 9/27

PAPI 27

NEW TAXIWAY G2 EXTENSION

TAXIWAY A

SEE BORROW SITE EXISTING CONDITIONS/PROPOSED REMOVALS SHEET FOR LEGENDS AND NOTES

EXISTING CABLE TO BE ABANDONED IN PLACE

EXISTING 16.5 SY OF FULL DEPTH BITUMINOUS PAVEMENT REMOVAL

EXISTING CABLE TO BE ABANDONED IN PLACE

SEE NOTE 6

EXISTING 18.3 SY OF FULL DEPTH BITUMINOUS PAVEMENT REMOVAL

EXISTING 130 LF OF CONCRETE FLUME TO BE REMOVED

SEE NOTE 6

EXISTING 45 LF OF CONCRETE FLUME TO BE REMOVED

EXISTING FLARED END SECTION TO BE REMOVED

EXISTING CABLE TO BE ABANDONED IN PLACE (SEE NOTES 1 AND 2)

1' (TYPICAL)

EXISTING 18.3 SY OF FULL DEPTH BITUMINOUS PAVEMENT REMOVAL

SEE NOTE 3

SEE NOTE 3

EXISTING FLARED END SECTION TO BE REMOVED

EXISTING 116 LF OF 18" RCP TO BE REMOVED

EXISTING 19.5 S.Y. OF FULL DEPTH BITUMINOUS PAVEMENT REMOVAL AND REPLACEMENT 2-2" LIFTS BITUMINOUS SURFACE COURSE (401)

MATCHLINE STA. 319+00

SEE NOTE 2

EXISTING 4 LF OF 30" RCP PIPE REMOVAL

SEE NOTE 2

SEE NOTE 2

EXISTING TRIPLE 8'x4' BOX CULVERT

EXISTING INLET TO BE REMOVED

EXISTING 45 LF OF CMP PIPE TO BE REMOVED

EXISTING ABANDONED POWER CABLE

VASI

EXISTING DRAINAGE GATE TO BE REMOVED (COST INCIDENTAL TO CMP PIPE REMOVAL)

EXISTING TAXIWAY GUIDANCE SIGN PANELS TO BE REPLACED

TAXIWAY C

TAXIWAY G3

NORTH

SCALE IN FEET 0 30 60

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LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

EXISTING CONDITIONS/PROPOSED REMOVALS TAXIWAY G2 EXTENSION

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SHEET 30 OF 50 SHEETS

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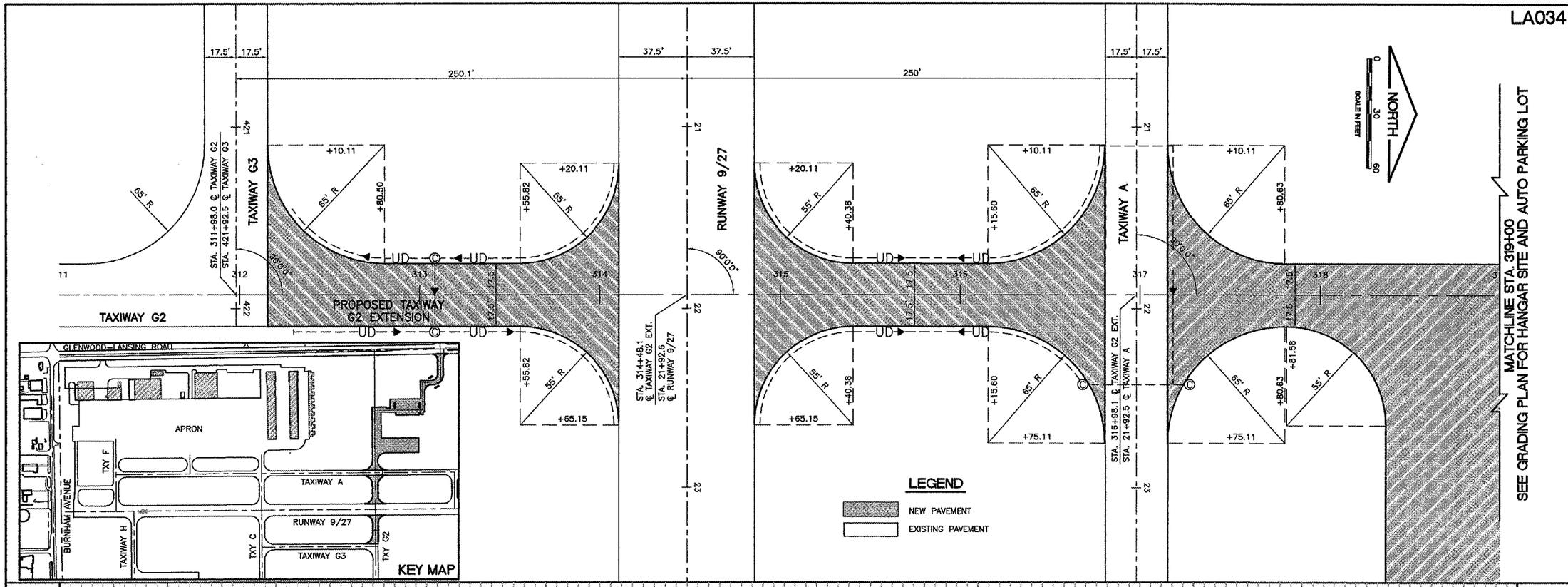

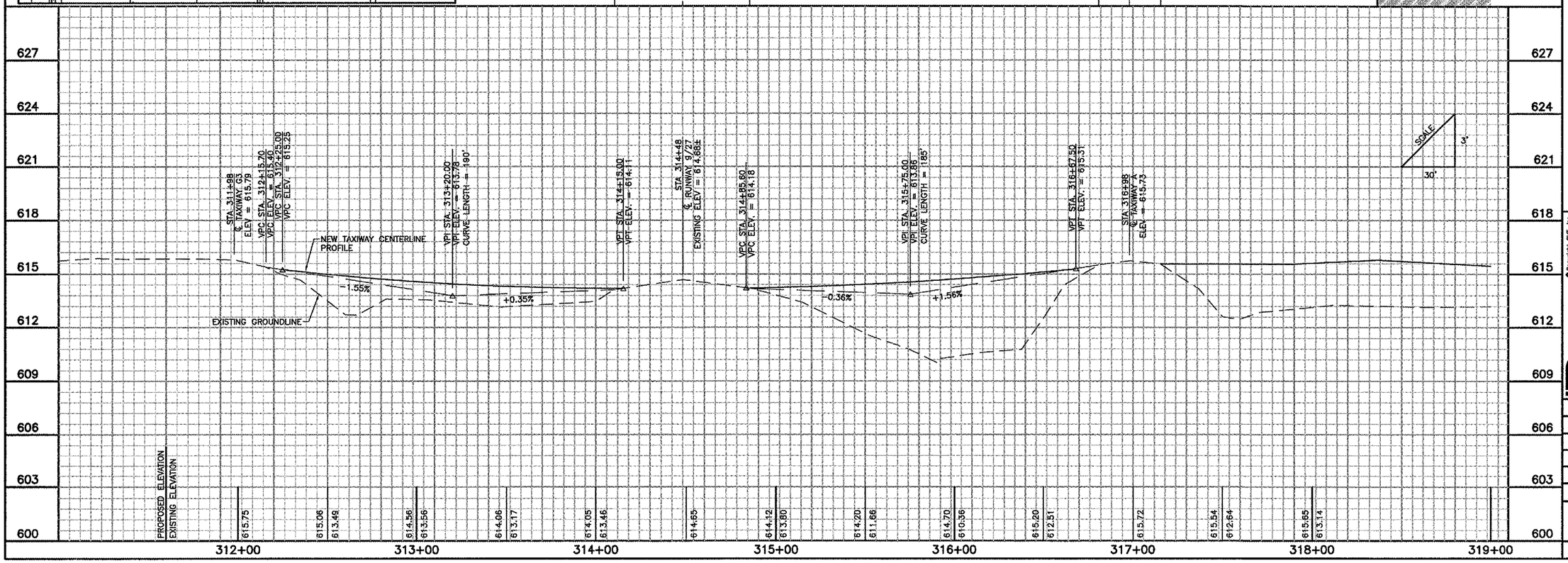

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NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

PLAN AND PROFILE TAXIWAY G2 STA. 311+00 TO STA. 319+00

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TAXIWAY A

STA. 316+98.10 ℄ TAXIWAY G2
STA. 21+92.50 ℄ TAXIWAY A

GRADE 7:1 TO MATCH EXISTING

NORTH
0 30 60
SCALE IN FEET

RUNWAY 9/27

STA. 314+48.10 ℄ TAXIWAY G2
STA. 21+92.60 ℄ RUNWAY 9/27

NEW GRADING LIMITS

PROPOSED TAXIWAY G2 EXTENSION

TAXIWAY G3

STA. 311+98.00 ℄ TAXIWAY G2
STA. 421+92.50 ℄ TAXIWAY G3

SEE GRADING PLAN BORROW SITE FOR LEGEND

LANSING MUNICIPAL AIRPORT
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NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

GRADING PLAN
TAXIWAY G2 EXTENSION

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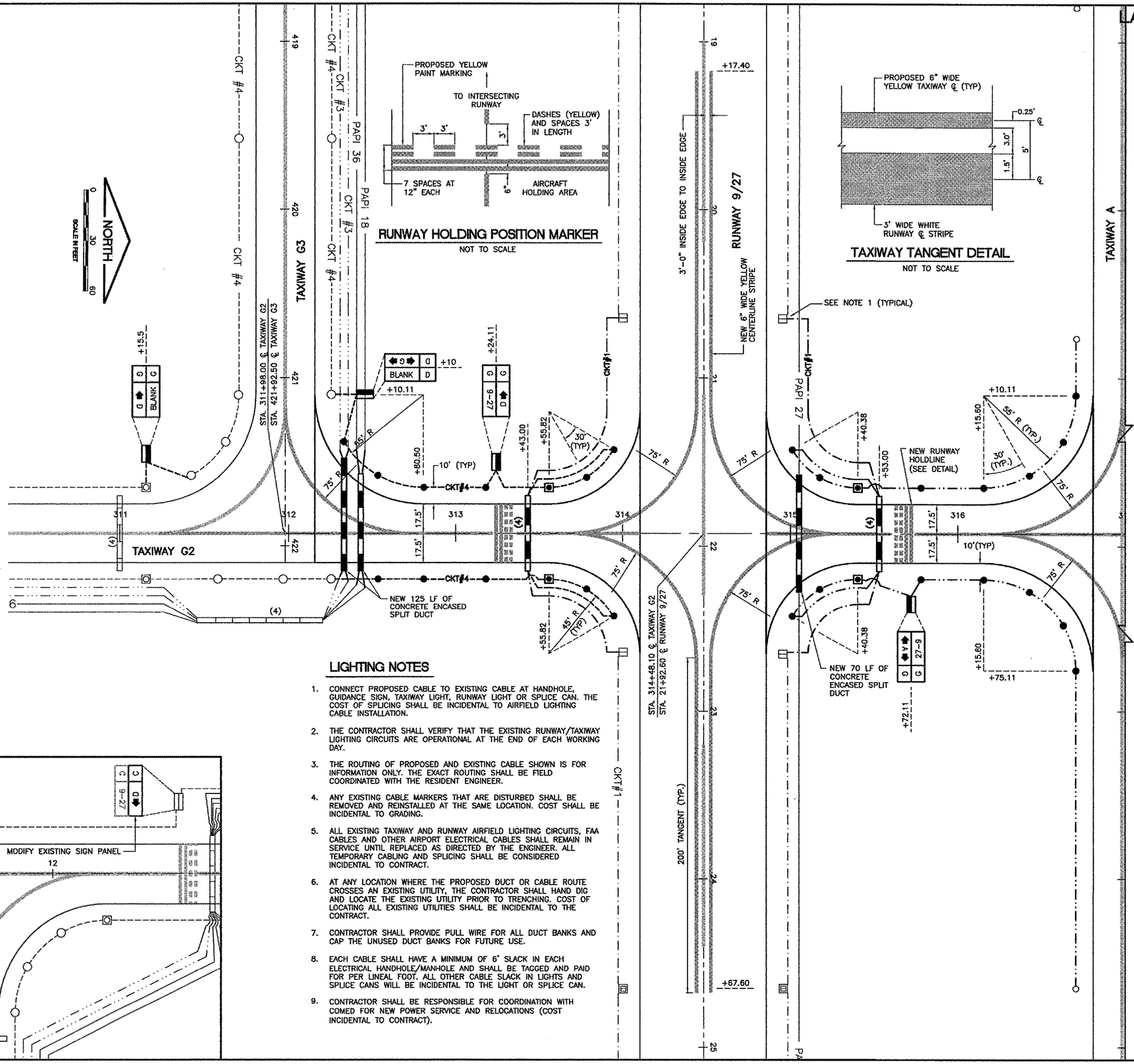
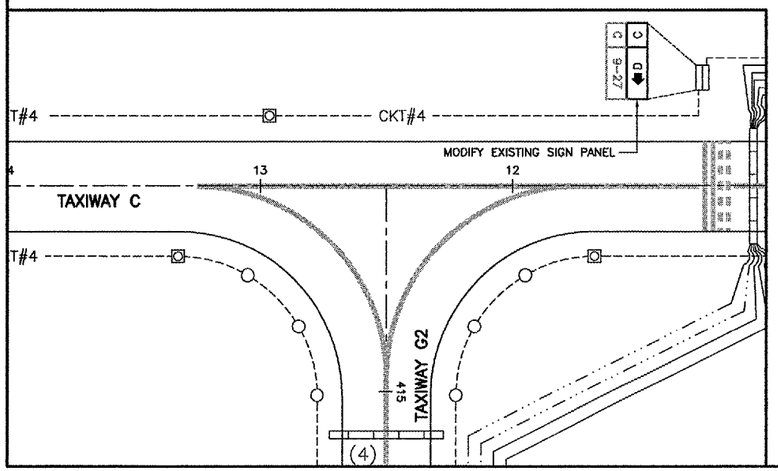
LEGEND

- NEW PAVEMENT
- NEW STAKE MOUNTED MEDIUM INTENSITY TAXIWAY LIGHT (MITL)
- NEW BASE MOUNTED MEDIUM INTENSITY TAXIWAY LIGHT (MITL)
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- NEW AIRFIELD GUIDANCE SIGN
- EXISTING AIRFIELD GUIDANCE SIGN
- NEW GRS CONDUIT, DIRECT BURY
- (4) NEW CONCRETE ENCASED DUCT (NUMBER OF WAYS NOTED)
- (4) EXISTING CONCRETE ENCASED DUCT (NUMBER OF WAYS SHOWN)
- NEW POWER POLE (BY COMED)
- HH NEW ELECTRICAL HANDHOLE
- T NEW ROADWAY TRANSCLOSURE
- G NEW GATE OPERATOR
- NEW RETROREFLECTIVE MARKER
- NEW ROADWAY LIGHT
- NEW GROUND ROD
- E NEW POWER CABLE (NO. AND SIZE OF CONDUITS AS SHOWN) (DIRECT BURIED)
- CKT#1 NEW 1/C #8 5KV, L-824 CABLE IN 34" UNIT DUCT CIRCUIT #1 RUNWAY 9/27
- CKT#2 NEW 1/C #8 5KV, L-824 CABLE IN 34" UNIT DUCT CIRCUIT #1 TAXIWAY A
- CKT#4 NEW 1/C #8 5KV, L-824 CABLE IN 34" UNIT DUCT CIRCUIT #1 TAXIWAY (G2,G3)
- CKT#1 EXISTING RUNWAY 9/27 CIRCUIT
- CKT#2 EXISTING TAXIWAY A CIRCUIT
- CKT#3 EXISTING RUNWAY 18/36 CIRCUIT
- CKT#4 EXISTING TAXIWAY CIRCUIT (G2,G3)
- PAPI36 EXISTING RUNWAY 36 PAPI CIRCUIT
- PAPI18 EXISTING RUNWAY 18 PAPI CIRCUIT
- PAPI27 EXISTING RUNWAY 27 PAPI CIRCUIT
- AWOS EXISTING AWOS CIRCUIT
- NEW DEPRESSED CURB





LIGHTING NOTES

1. CONNECT PROPOSED CABLE TO EXISTING CABLE AT HANDHOLE, GUIDANCE SIGN, TAXIWAY LIGHT, RUNWAY LIGHT OR SPLICE CAN. THE COST OF SPLICING SHALL BE INCIDENTAL TO AIRFIELD LIGHTING CABLE INSTALLATION.
2. THE CONTRACTOR SHALL VERIFY THAT THE EXISTING RUNWAY/TAXIWAY LIGHTING CIRCUITS ARE OPERATIONAL AT THE END OF EACH WORKING DAY.
3. THE ROUTING OF PROPOSED AND EXISTING CABLE SHOWN IS FOR INFORMATION ONLY. THE EXACT ROUTING SHALL BE FIELD COORDINATED WITH THE RESIDENT ENGINEER.
4. ANY EXISTING CABLE MARKERS THAT ARE DISTURBED SHALL BE REMOVED AND REINSTALLED AT THE SAME LOCATION. COST SHALL BE INCIDENTAL TO GRADING.
5. ALL EXISTING TAXIWAY AND RUNWAY AIRFIELD LIGHTING CIRCUITS, FAA CABLES AND OTHER AIRPORT ELECTRICAL CABLES SHALL REMAIN IN SERVICE UNTIL REPLACED AS DIRECTED BY THE ENGINEER. ALL TEMPORARY CABLING AND SPLICING SHALL BE CONSIDERED INCIDENTAL TO CONTRACT.
6. AT ANY LOCATION WHERE THE PROPOSED DUCT OR CABLE ROUTE CROSSES AN EXISTING UTILITY, THE CONTRACTOR SHALL HAND DIG AND LOCATE THE EXISTING UTILITY PRIOR TO TRENCHING. COST OF LOCATING ALL EXISTING UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT.
7. CONTRACTOR SHALL PROVIDE PULL WIRE FOR ALL DUCT BANKS AND CAP THE UNUSED DUCT BANKS FOR FUTURE USE.
8. EACH CABLE SHALL HAVE A MINIMUM OF 6' SLACK IN EACH ELECTRICAL HANDHOLE/MANHOLE AND SHALL BE TAGGED AND PAID FOR PER LINEAL FOOT. ALL OTHER CABLE SLACK IN LIGHTS AND SPLICE CANS WILL BE INCIDENTAL TO THE LIGHT OR SPLICE CAN.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH COMED FOR NEW POWER SERVICE AND RELOCATIONS (COST INCIDENTAL TO CONTRACT).

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LANSING MUNICIPAL AIRPORT
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NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

LIGHTING AND PAVEMENT MARKING PLAN TAXIWAY G2 EXTENSION

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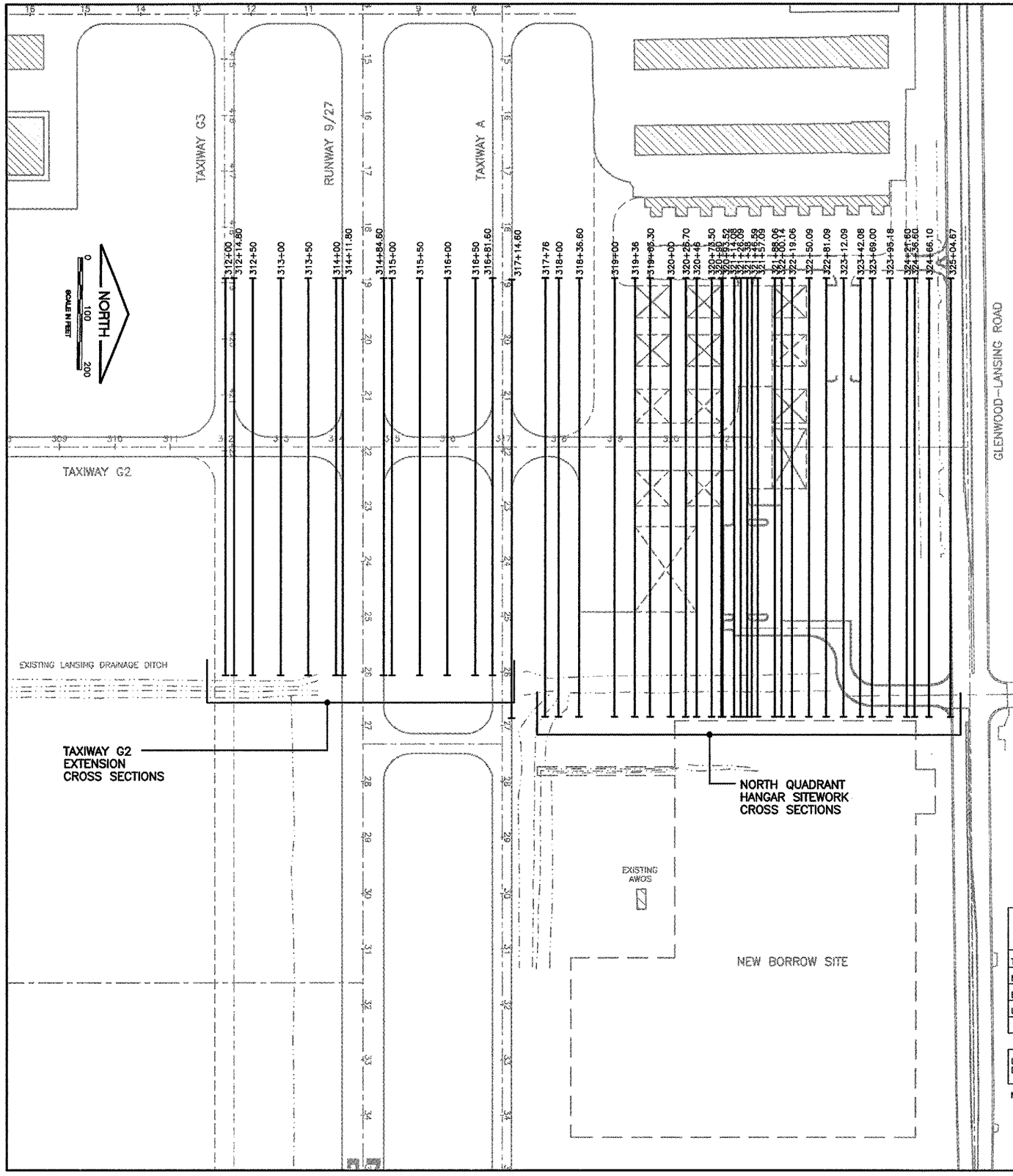
SHEET 33 OF 50 SHEETS



GENERAL EARTHWORK NOTES:

1. ALL EARTHWORK QUANTITIES ARE CALCULATED BASED ON THE MATERIAL IN ITS INITIAL OR FINAL POSITION AS SHOWN IN THE PLANS AND QUANTIFIED BY METHOD OF AVERAGE END AREAS. SHRINKAGE FACTORS HAVE BEEN ESTIMATED AND ARE INCLUDED FOR THE UNCLASSIFIED EXCAVATION DISPOSAL QUANTITY AND NO CHANGES IN PAYMENT WILL BE MADE FOR ANY VARIATIONS IN SHRINKAGE.
2. ALL HAUL ROADS TO BE CONSTRUCTED FOR THE PROJECT WILL NOT BE MEASURED FOR PAYMENT BUT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
3. SURPLUS MATERIALS SHALL BE DISPOSED OF OFFSITE BY THE CONTRACTOR. COST OF DISPOSAL OF EXCESS MATERIALS SHALL BE PAID FOR AS UNCLASSIFIED DISPOSAL OFFSITE.
4. CONTRACTOR'S HAUL ROADS SHALL BE RESTORED WITH 4" MINIMUM OF TOPSOIL PLACED. ALL HAUL ROAD RESTORATION SHALL BE INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT SHALL BE MADE.
5. WHEN THE VOLUME OF UNCLASSIFIED EXCAVATION IS NOT SUFFICIENT FOR EMBANKMENT FILL, IT SHALL BE SUPPLIED FROM THE ON–SITE BORROW AREA.
6. UNCLASSIFIED EXCAVATION IS INCIDENTAL TO EMBANKMENT FILL. TOPSOIL STRIPPING IS INCIDENTAL TO TOPSOIL PLACEMENT AND SHOULDER FILL.
7. EXISTING BERMS SHALL REMAIN IN PLACE AT THE LANSING DRAINAGE DITCH.
8. BORROW AREA SHALL HAVE 4" MINIMUM OF TOPSOIL PLACED AND SEEDED AND MULCHED. SEEDING AND MULCHING SHALL BE PAID UNDER ITEMS 901 AND 908, RESPECTIVELY. CONTRACTOR'S HAUL ROADS TO THE BORROW SITE SHALL HAVE 4" MINIMUM OF TOPSOIL PLACED AND SEEDED AND MULCHED (COST INCIDENTAL).
9. AREAS OF UNSUITABLE MATERIAL (UNCLASSIFIED EXCAVATION) SHALL BE AS DESIGNATED BY THE ENGINEER. THE QUANTITY OF UNSUITABLE MATERIAL SHALL NOT BE USED AS EMBANKMENT FILL MATERIAL UNLESS AUTHORIZED BY THE ENGINEER.
10. CONTRACTOR IS REQUIRED TO CONSTRUCT THE PROPOSED BORROW SITE NO HIGHER THAN THE LINES AND GRADES SHOWN TO MEET COMPENSATORY STORAGE VOLUME REQUIREMENTS PER THE IDOT OFFICE OF WATER RESOURCES PERMIT.

LEGEND

- NEW PAVEMENT
- EXISTING BUILDING
- PROPOSED/FUTURE BUILDING/PAVEMENT
- EXISTING PAVEMENT

EARTHWORK SUMMARY TABLE

LOCATION	TOPSOIL STRIPPING INITIAL POSITION (CUBIC YARD)	TOPSOIL PLACEMENT FINAL POSITION (CUBIC YARD)	SHOULDER FILL FINAL POSITION (CUBIC YARD)	UNCLASSIFIED EXCAVATION INITIAL POSITION (CUBIC YARD)	EMBANKMENT FILL FINAL POSITION (CUBIC YARD)
TAXIWAY G2 EXTENSION	1,807	585	671	1,046	649
NORTH QUADRANT HANGAR SITEWORK	10,984	2,720	2,470	5,580	21,405
BORROW SITE	13,234	4,443	10	25,290	–
UNSUITABLE MATERIAL	–	–	–	1,000	–
TOTALS	26,025	7,748	3,151	32,915	22,054
UNCLASSIFIED EXCAVATION DISPOSAL	14,036	–	–	7,553	–

NOTES: 1. UNCLASSIFIED EXCAVATION DISPOSAL SHALL BE COMPUTED USING 10% SHRINKAGE FOR TOPSOIL PLACEMENT AND SHOULDER FILL AND 15% SHRINKAGE FOR EMBANKMENT FILL.
2. GLENWOOD–LANSING ROAD EARTHWORK QUANTITIES ARE NOT INCLUDED IN THE ABOVE EARTHWORK SUMMARY TABLE.

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LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

INDEX TO CROSS SECTIONS/ EARTHWORK SUMMARY

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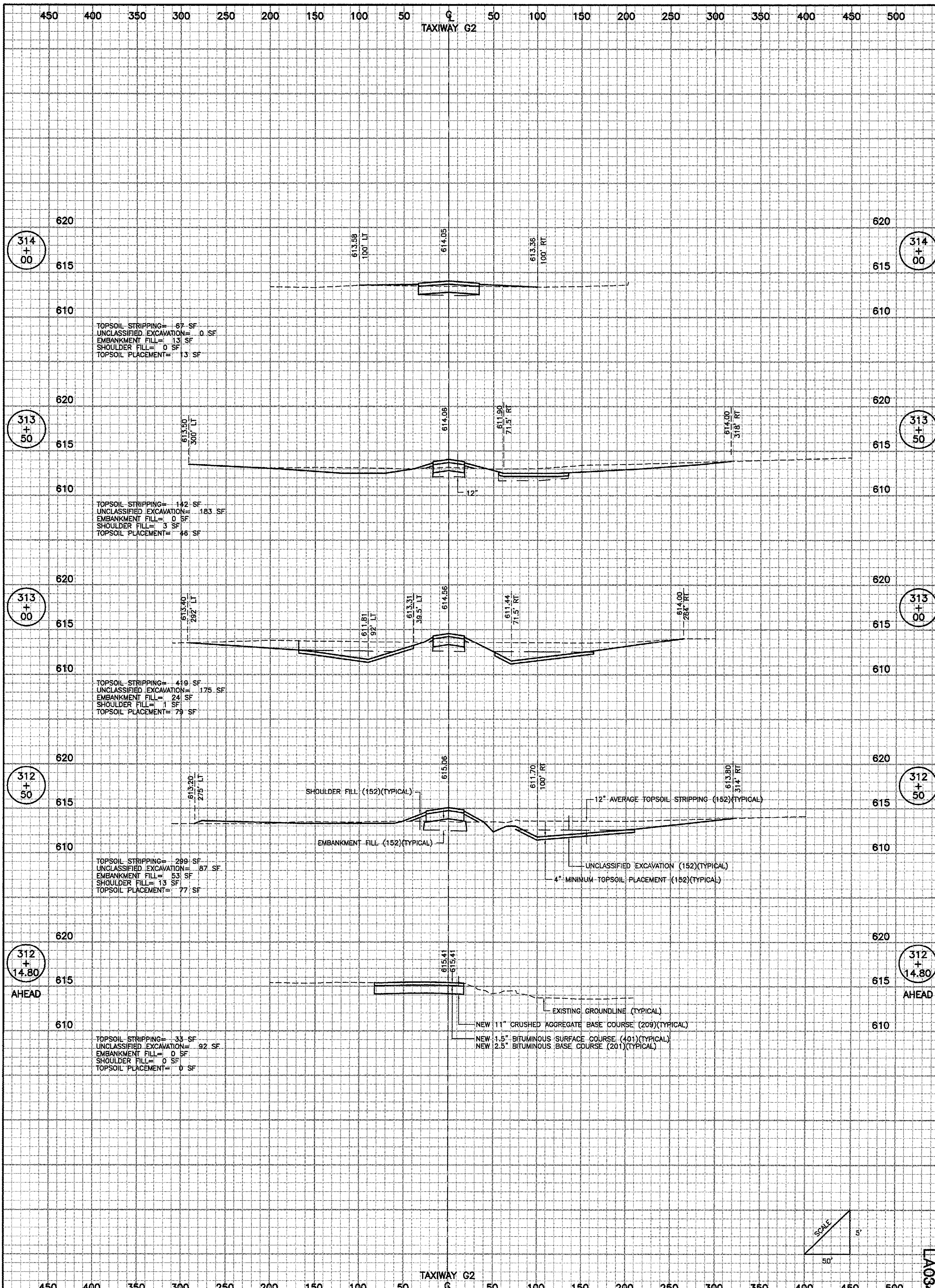
SHEET 34 OF 50 SHEETS



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NORTH QUADRANT SITEWORK - PHASE 1 AND TAXIWAY G2 EXTENSION

CROSS SECTIONS STA. 312+00 TO STA. 314+00

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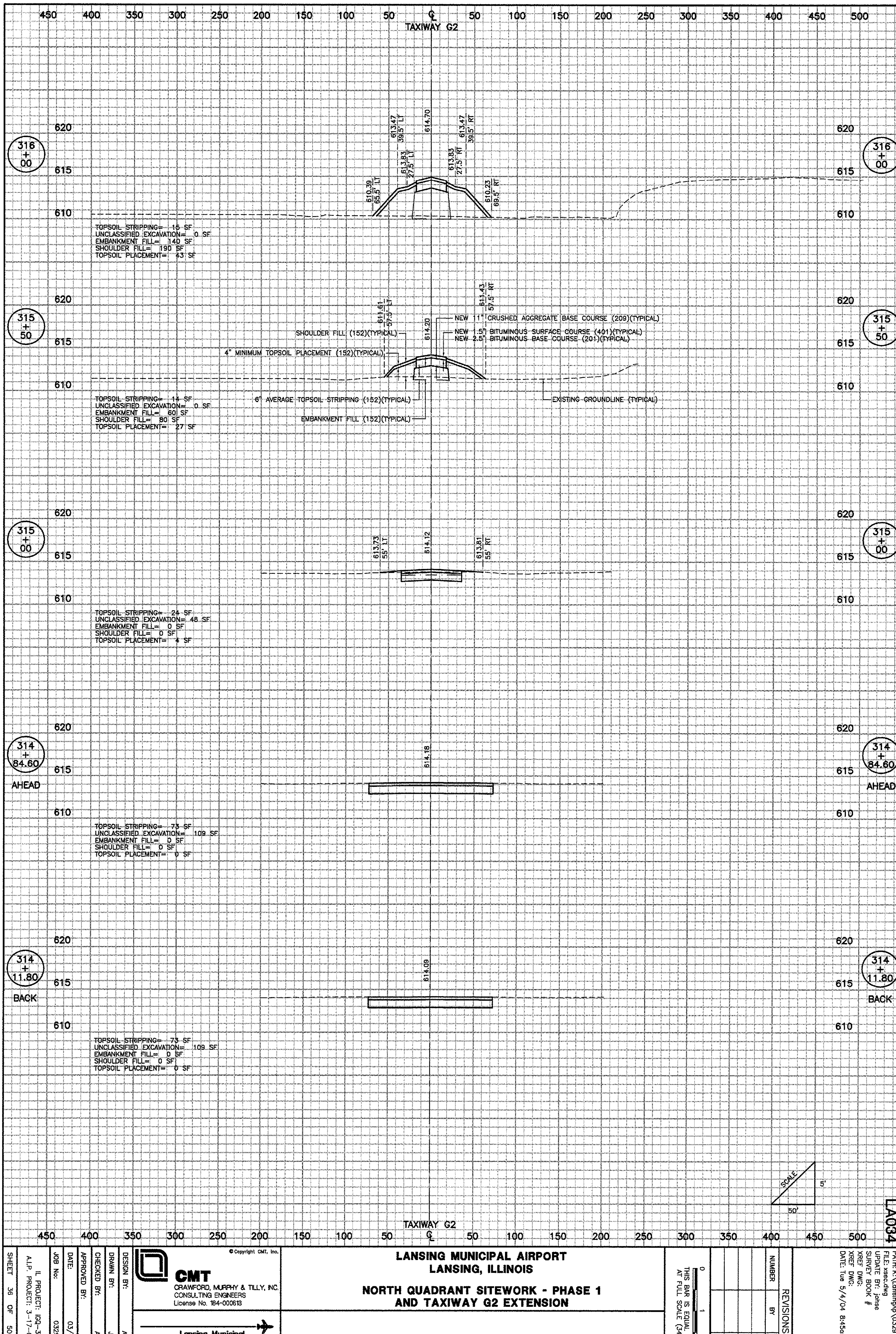

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NORTH QUADRANT SITEWORK - PHASE 1 AND TAXIWAY G2 EXTENSION

CROSS SECTIONS STA. 314+11.80 TO STA. 316+00

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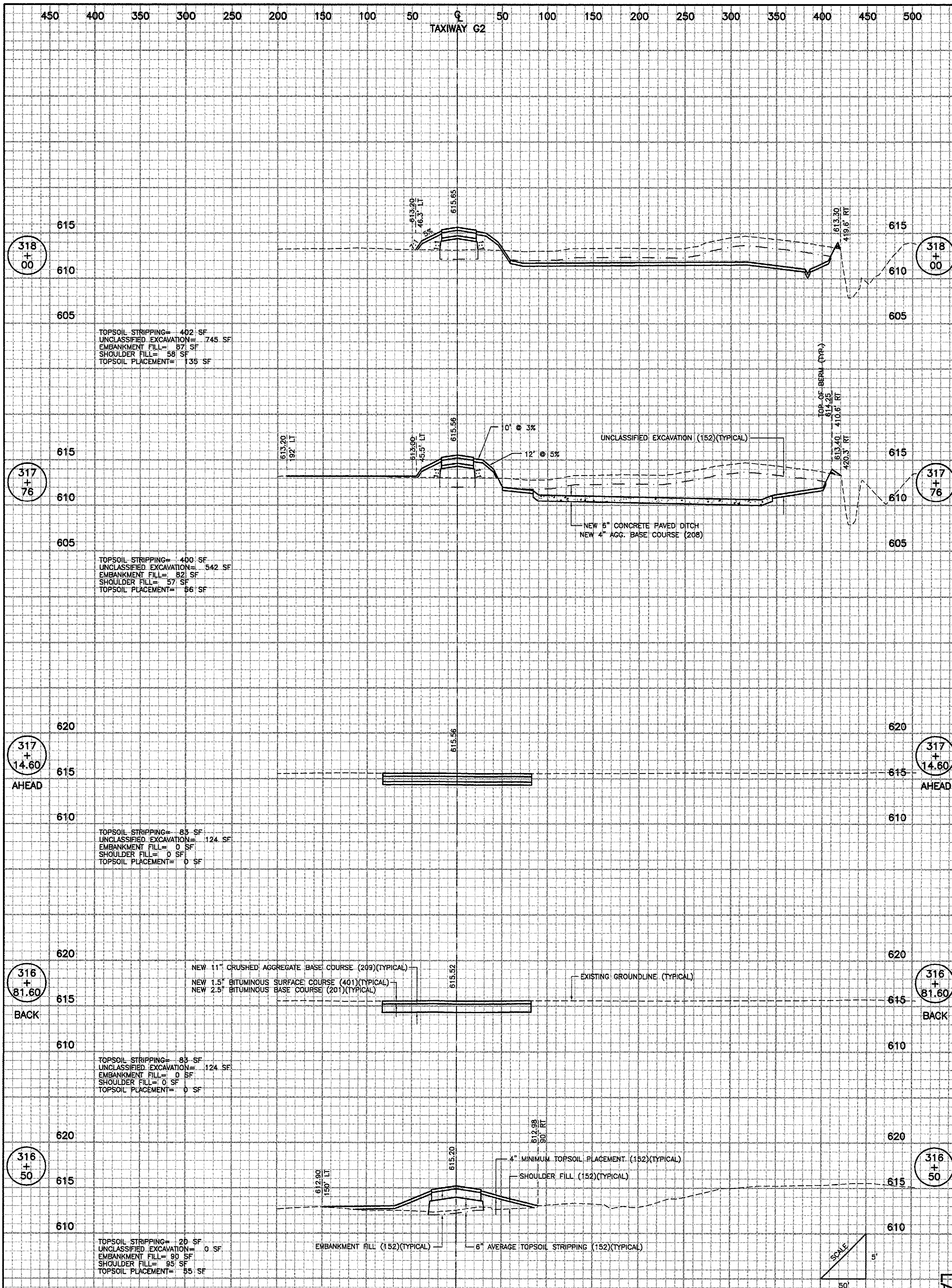

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AND TAXIWAY G2 EXTENSION

CROSS SECTIONS
STA. 316+50 TO STA. 318+00

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LANSING MUNICIPAL AIRPORT
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NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

CROSS SECTIONS
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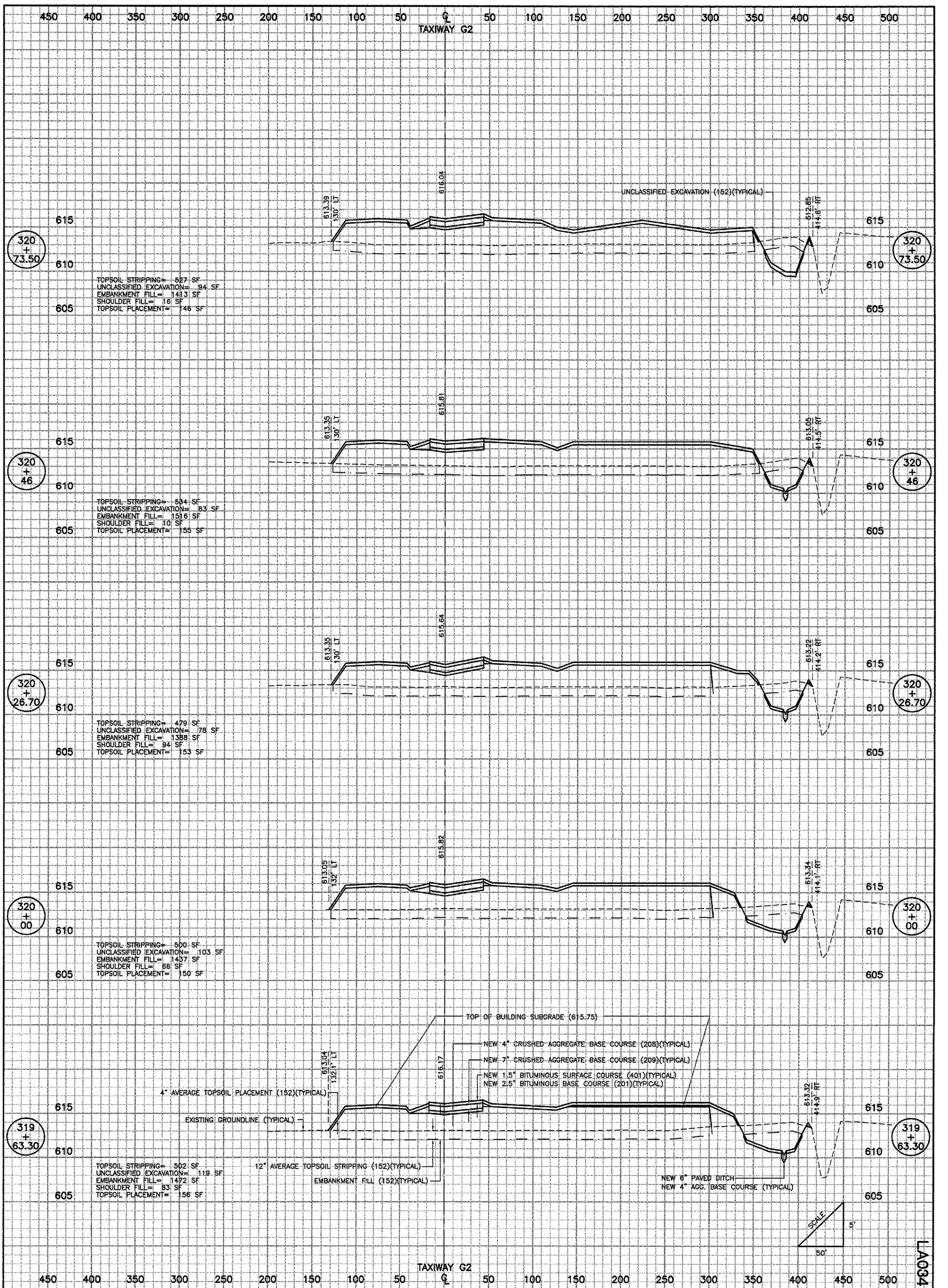
SHEET 38 OF 50 SHEETS



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NORTH QUADRANT SITEWORK - PHASE 1
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CROSS SECTIONS
STA. 319+63.30 TO STA. 320+73.50

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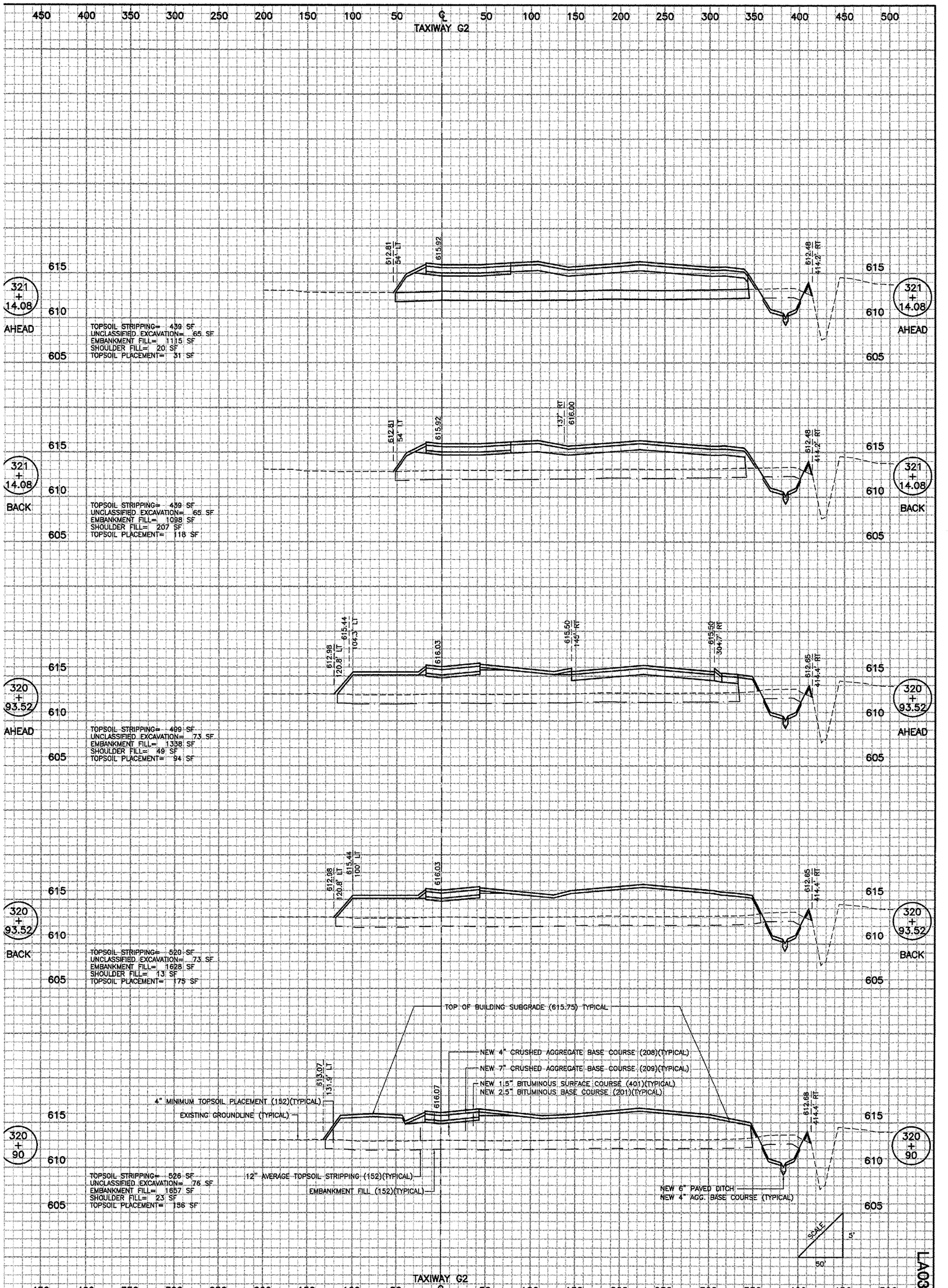

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LANSING MUNICIPAL AIRPORT
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NORTH QUADRANT SITEWORK - PHASE 1
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CROSS SECTIONS
STA. 320+90 TO STA. 321+14.08

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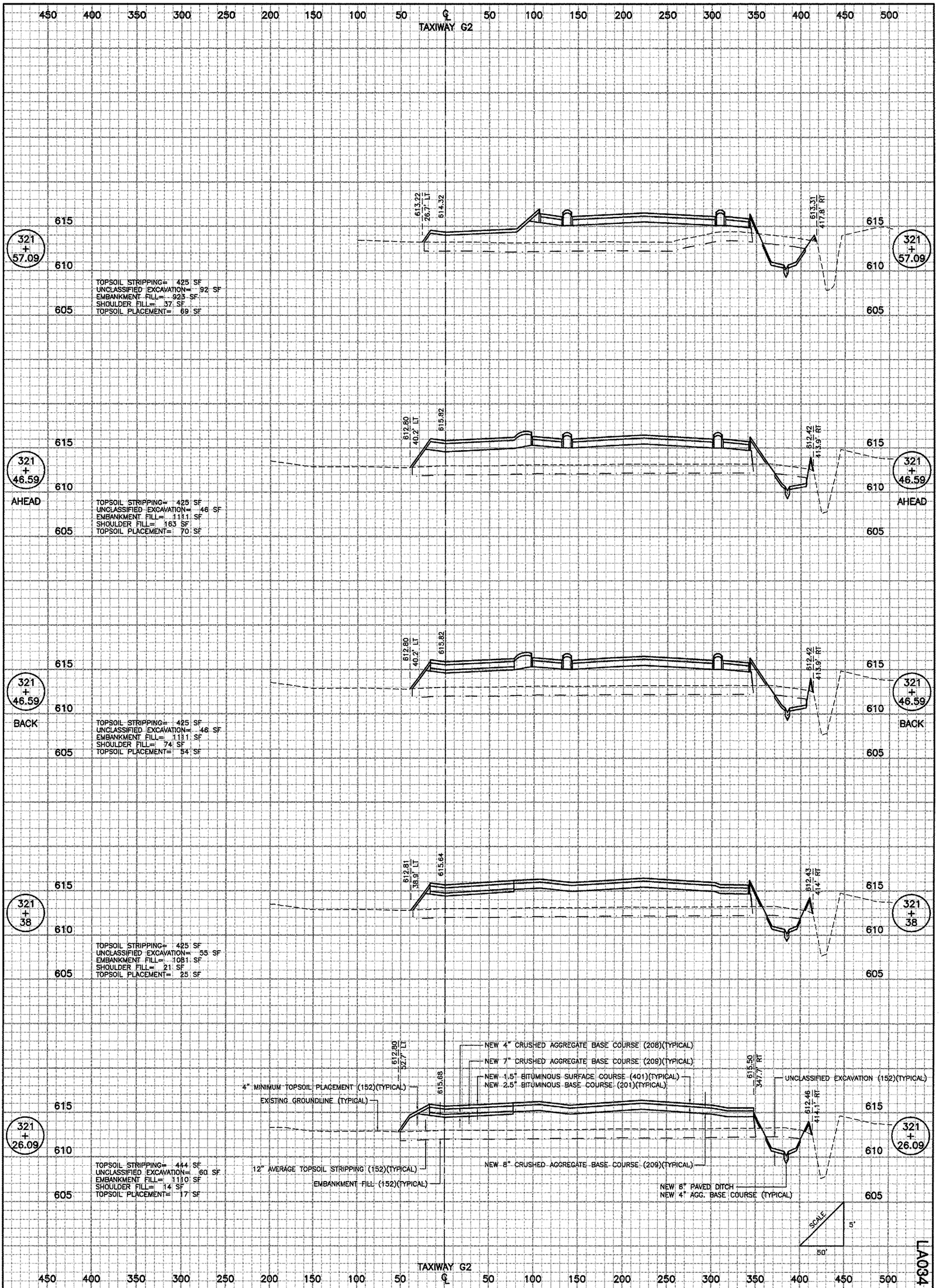

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Lansing Municipal airport

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

CROSS SECTIONS
STA. 321+26.09 TO STA. 321+57.09

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

NUMBER	REVISIONS BY	DATE

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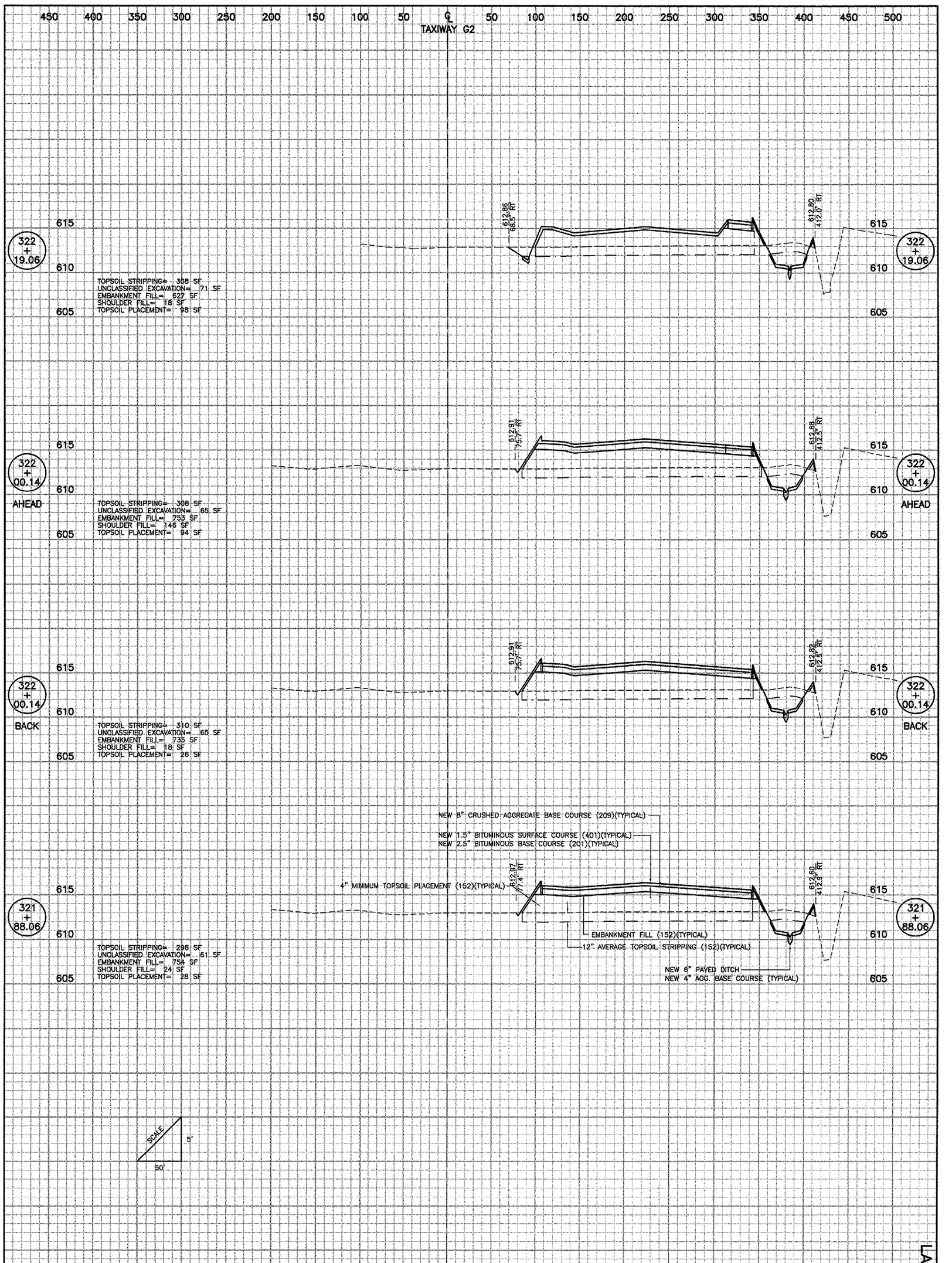
FILE: xsec.dwg
UPDATE BY: jahse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Tue 5/4/04 8:53am

DESIGN BY:	ARM
DRAWN BY:	JRD
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02
IL PROJECT: ICQ-3329	
A.I.P. PROJECT: 3-17-0121-B21	
SHEET 41 OF 50 SHEETS	



LA034

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Lansing Municipal airport

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

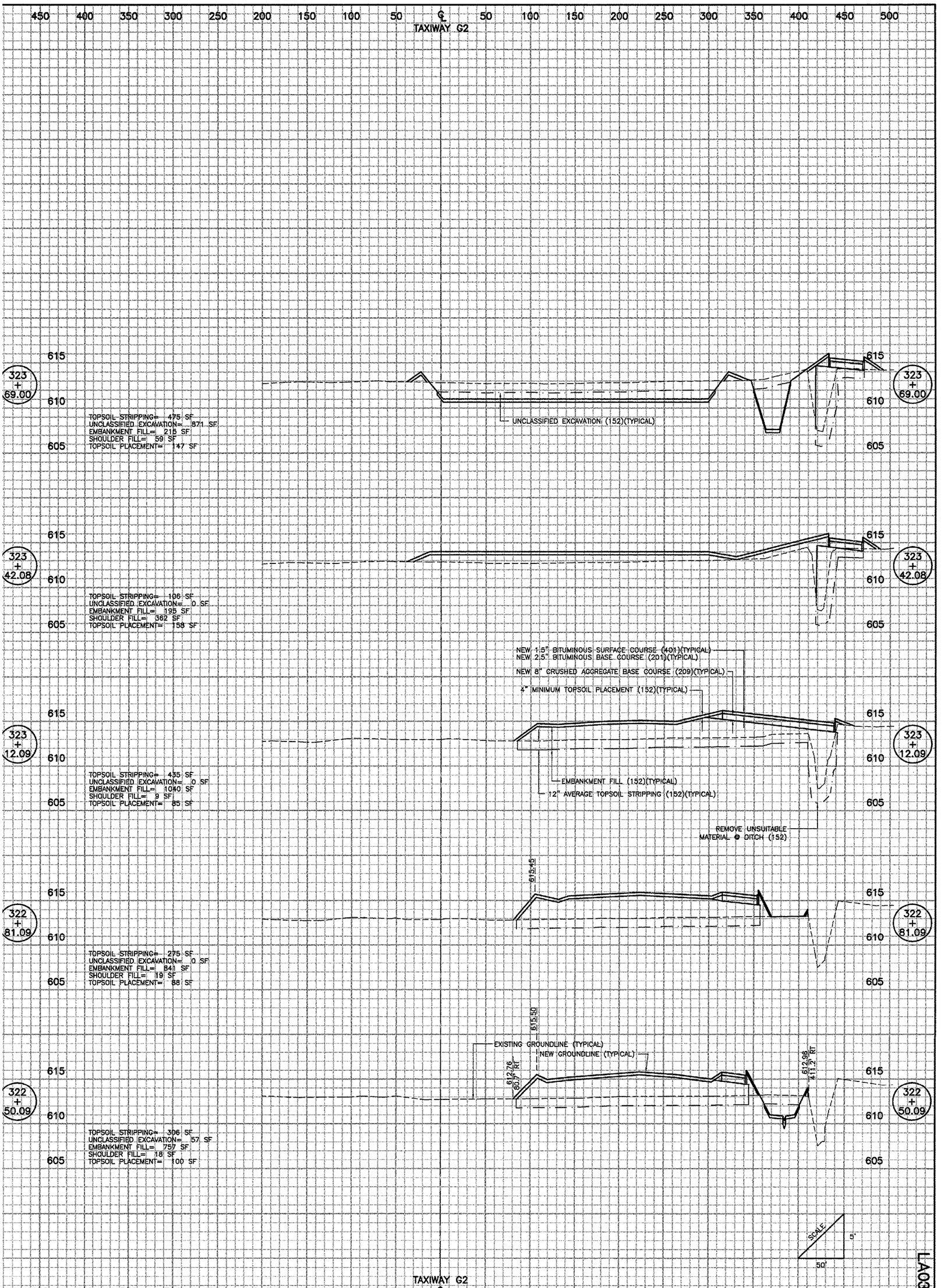
CROSS SECTIONS
STA. 321+88.06 TO STA. 322+19.06

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

REVISIONS		
NUMBER	BY	DATE

PATH: K:\Lansing4p\0329702\dnrow\sheet
FILE: xsec.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG'S:
XREF DWG:
DATE: Tue 5/4/04 8:54am

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02
IL PROJECT: IGQ-3329	
A.I.P. PROJECT: 3-17-0121-B21	
SHEET 42 OF 50 SHEETS	



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Lansing Municipal airport

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

CROSS SECTIONS
STA. 322+50.09 TO STA. 323+69.00

THIS BAR IS EQUAL TO 2" AT FULL SCALE (34x22).

NUMBER	BY	DATE

REVISIONS

PATH: K:\Lansing4p\0329702\dgn\sheet
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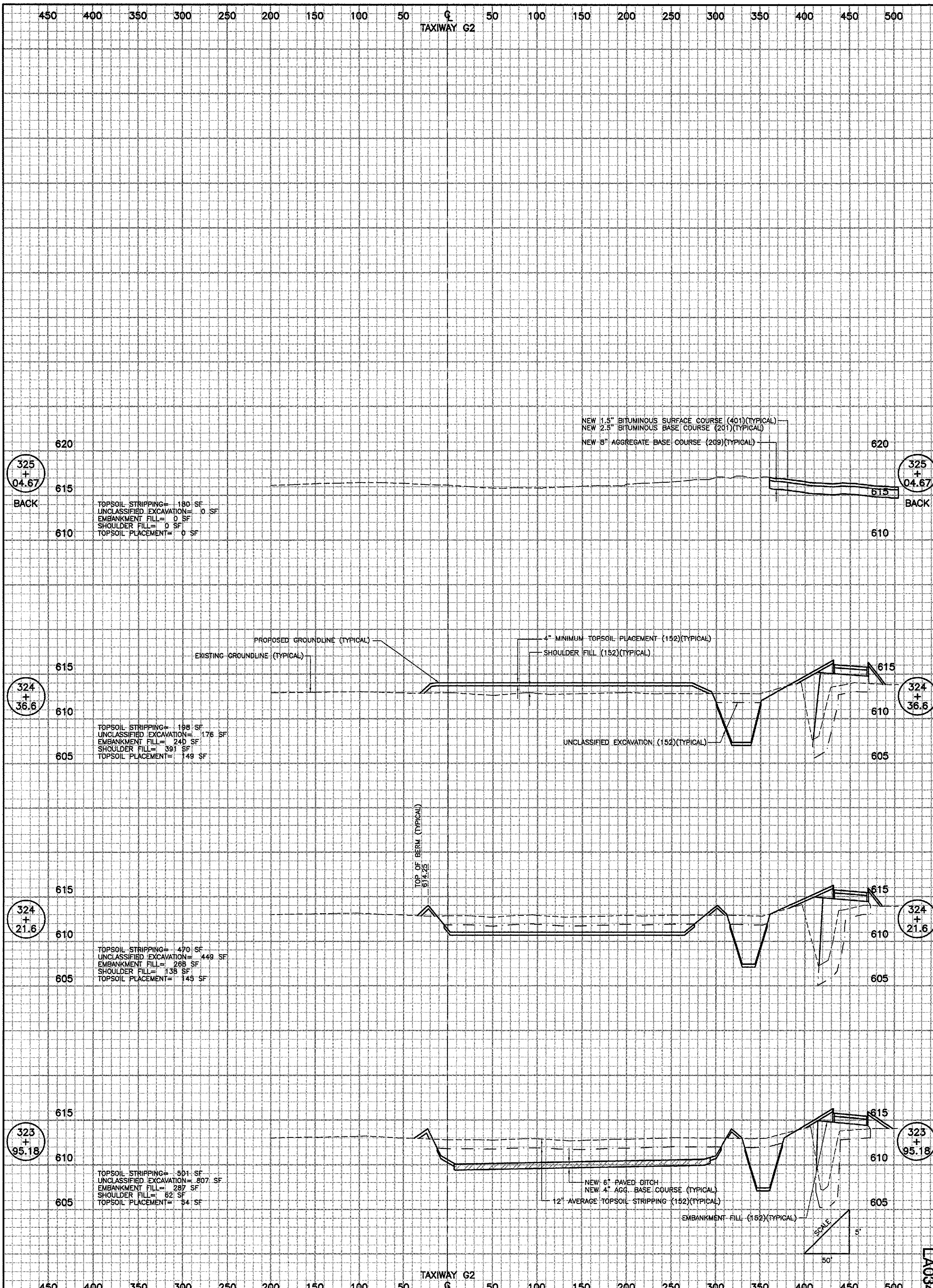
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Tue 5/4/04 8:58am

DESIGN BY: ARM
DRAWN BY: JRO
CHECKED BY:
APPROVED BY:
DATE: 03/04/05
JOB No: 0329-02

IL PROJECT: IGO-3329
A.I.P. PROJECT: 3-17-0121-B21



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UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Tue 5/4/04 9:00am

REVISIONS		
NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1 AND TAXIWAY G2 EXTENSION

CROSS SECTIONS STA. 323+95.18 TO STA. 325+04.67

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Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

LEGEND

- NEW PAVEMENT
- FUTURE HANGAR
- FUTURE PAVEMENT
- B1 PROPOSED SOIL BORING

GEOTECHNICAL LAYOUT TABLE

BORING/CORE NO.	STATION	OFFSET RUNWAY ℄	DEPTH	ELEVATION
B1	315+75 TXY G2	℄	10'	610.83
B2	319+00 TXY G2	℄	10'	613.18
B3	19+00 TXY A	310' LT.	10'	613.19
B4	24+80 TXY A	310' LT.	10'	613.18
B5	20+10 TXY A	515' LT.	10'	613.03
B6	23+00 TXY A	600' LT.	10'	612.95
B7	18+50 TXY A	710' LT.	10'	612.94
B8	319+00 TXY G2	600' RT.	10'	612.99
B9	322+50 TXY G2	810' RT.	10'	613.29

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL

CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois

TSC

BORING 1 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265

ELEVATIONS

GROUND SURFACE 610.8

END OF BORING 600.8

WATER LEVEL OBSERVATIONS

WHILE DRILLING Dry

▽ AT END OF BORING Dry

▼ 24 HOURS

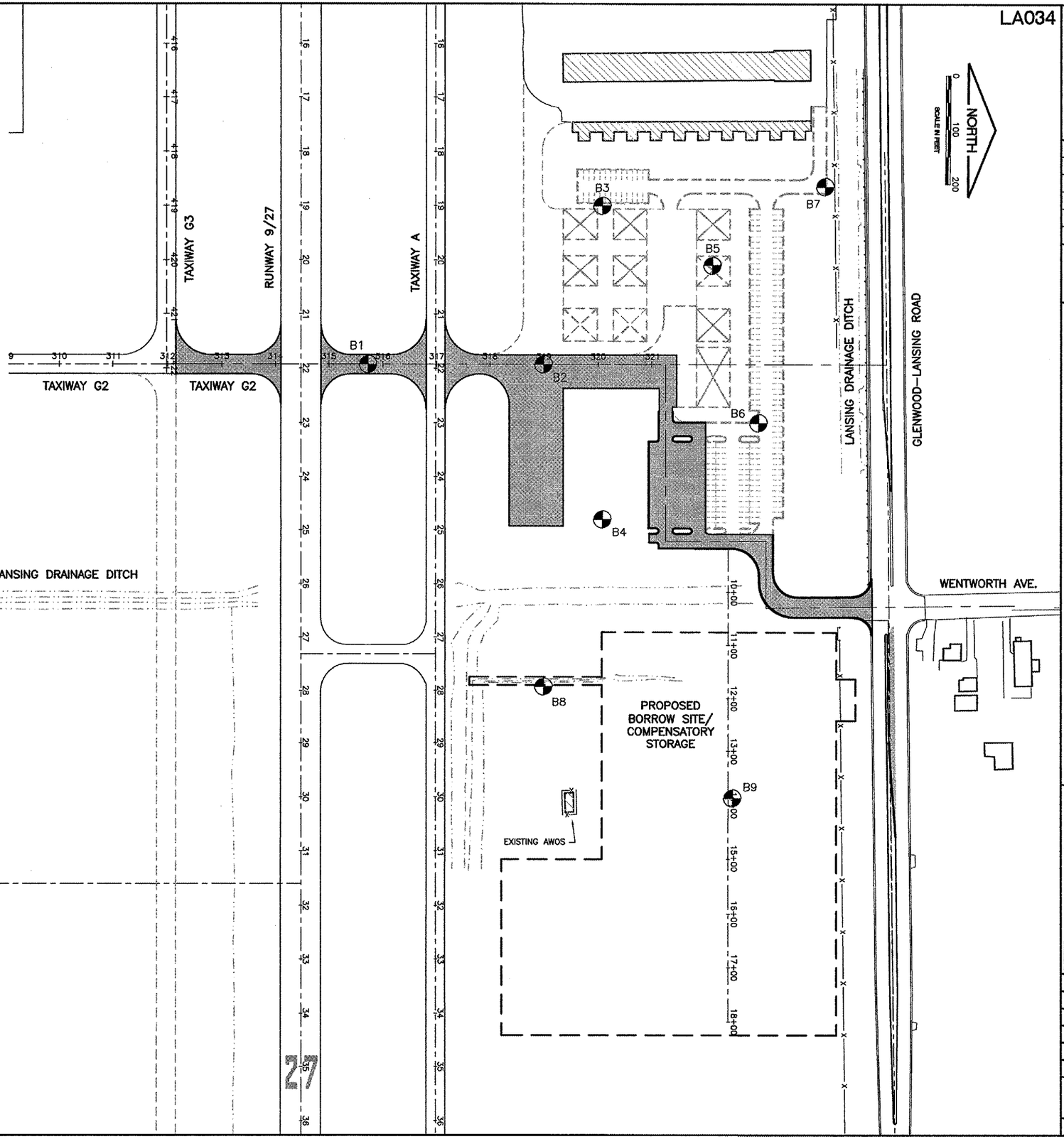
SAMPLE NO.	SAMPLE TYPE	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
						0.4	610.4	5" Black SILTY CLAY (topsoil), very moist
1	SS	4-4-5	19.9	3.93 4.25*				Very tough to hard brown and gray CLAY, moist A-6/A-7-6
2	SS	4-5-6	18.4	3.93 3.25*				
						5.5	605.3	
3	SS	3-4-4	20.5	2.25*				Very tough to tough gray CLAY, moist to very moist A-6/A-7-6
4	SS	3-3-3	20.2	1.29 1.5*				
								End of Boring at 10.0'

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

DISTANCE BELOW SURFACE IN FEET

DRILL RIG NO. 256

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



PATH: K:\0329702\sheets\
FILE: enginfo.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Fri 3/26/04 2:18pm

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

ENGINEERING INFORMATION - SHEET 1

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000513

Lansing Municipal airport

DESIGN BY:	ARM
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IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SHEET 45 OF 50 SHEETS

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 2 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 613.2
END OF BORING 603.2
WATER LEVEL OBSERVATIONS: WHILE DRILLING Dry; AT END OF BORING Dry; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.0	612.4	10" Black SILTY CLAY (topsoil), very moist
1	SS		2-2-3	24.4	1.56 1.5*		0.8	612.4	Tough brown, gray and black CLAY, trace organic, moist to very moist A-7-6
2	SS		4-4-4	19.2	2.64 3.25*		3.0	610.2	Very tough brown and gray CLAY, moist A-6/A-7-6
3	SS		4-4-5	18.5	3.79*		8.0	605.2	Tough to very tough gray CLAY, moist A-6/A-7-6
4	SS		3-4-5	19.7	1.85 2.0*				

End of Boring at 10.0'

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

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

DRILL RIG NO. 256

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 3 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 613.2
END OF BORING 603.2
WATER LEVEL OBSERVATIONS: WHILE DRILLING Dry; AT END OF BORING Dry; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.0	612.6	7" Black SILTY CLAY (topsoil), very moist
1	SS		2-2-3	23.9	1.89 2.25*		0.5	612.6	Tough to very tough gray and black CLAY, trace organic, moist A-7-6
2	SS		4-4-5	20.3	4.46 4.25*		3.0	610.2	Hard brown and gray CLAY, moist A-6/A-7-6
3	SS		5-5-6	18.1	4.54*		8.0	605.2	Tough gray CLAY, moist A-6/A-7-6
4	SS		3-4-4	20.8	1.95 1.5*				

End of Boring at 10.0'

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

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

DRILL RIG NO. 256

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 4 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 613.2
END OF BORING 603.2
WATER LEVEL OBSERVATIONS: WHILE DRILLING Dry; AT END OF BORING Dry; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.3	612.3	11" Black SILTY CLAY (topsoil), very moist
1	SS		3-2-2	22.0	1.88 1.25*		0.3	612.3	Tough brown, gray and black CLAY, trace organic, moist to very moist A-7-6
2	SS		2-2-3	27.9	0.53 0.5*		3.0	610.2	Soft brown, gray and black SILTY CLAY, very moist A-7-6 (28) LL/PL/PI=45/15/30
3	SS		5-5-4	17.5	4.54*		5.5	607.7	Hard brown and gray CLAY LOAM, trace gravel, moist A-6
4	SS		3-4-4	20.7	2.68 2.0*		8.0	605.2	Very tough gray CLAY, moist A-6/A-7-6

End of Boring at 10.0'

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

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

DRILL RIG NO. 256

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 5 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 613.0
END OF BORING 603.0
WATER LEVEL OBSERVATIONS: WHILE DRILLING Dry; AT END OF BORING Dry; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.0	612.2	10" Black SILTY CLAY (topsoil), very moist
1	SS		3-3-2	25.4	1.0*		0.8	612.2	Stiff to tough gray and black CLAY, trace organic, very moist A-7-6
2	SS		5-5-6	18.8	4.54*		5.0	607.2	Hard brown and gray CLAY LOAM, trace gravel, moist A-6
3	SS		4-5-6	19.2	4.59 4.54*		8.0	605.0	Tough to very tough gray CLAY LOAM, trace gravel, moist A-6
4	SS		3-4-4	19.8	1.85 2.0*				

End of Boring at 10.0'

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

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

DRILL RIG NO. 256

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 6 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 613.0
END OF BORING 603.0
WATER LEVEL OBSERVATIONS: WHILE DRILLING Dry; AT END OF BORING Dry; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.7	612.5	8" Black SILTY CLAY (topsoil), very moist
1	SS		3-3-3	22.1	1.66 1.75*		0.7	612.5	Tough brown, gray and black CLAY, trace organic, moist A-7-6
2	SS		4-6-7	18.0	5.12 4.5+*		3.0	610.0	Hard brown and gray CLAY LOAM, trace gravel, moist A-6
3	SS		4-5-4	17.9	3.5*		5.5	607.5	Very tough to tough gray CLAY, moist to very moist A-6
4	SS		3-3-5	20.2	1.75 1.5*				

End of Boring at 10.0'

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

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

DRILL RIG NO. 256

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 7 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 612.9
END OF BORING 602.9
WATER LEVEL OBSERVATIONS: WHILE DRILLING Dry; AT END OF BORING Dry; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.0	612.1	10" Black SILTY CLAY (topsoil), very moist
1	SS		3-3-3	24.0	2.25*		0.9	612.1	Very tough gray and black CLAY, trace organic, moist A-7-6
2	SS		5-6-6	18.0	5.19 4.25*		3.0	608.9	Hard to very tough brown and gray CLAY LOAM, trace gravel, moist A-6
3	SS		4-5-5	18.9	3.47 3.5*		8.0	604.9	Tough brown and gray CLAY, moist A-7-6
4	SS		3-3-4	21.7	1.75*				

End of Boring at 10.0'

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

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

DRILL RIG NO. 256

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 8 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 613.0
END OF BORING 605.0
WATER LEVEL OBSERVATIONS: WHILE DRILLING Dry; AT END OF BORING Dry; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.7	612.5	8" Black SILTY CLAY (topsoil), very moist
1	SS		2-2-3	26.3	1.0*		0.7	612.5	Stiff to tough brown, gray and black CLAY, trace organic, very moist A-7-6
2	SS		4-4-5	21.1	2.39 2.0*		3.0	610.0	Tough to very tough gray CLAY, moist A-7-6
3	SS		4-4-5	18.0	3.14 3.0*		5.5	607.5	Very tough gray CLAY LOAM, trace gravel, moist A-6
4	SS		4-3-3	20.9	1.5*		8.0	605.0	Tough gray CLAY, moist to very moist A-6/A-7-6

End of Boring at 10.0'

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

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

DRILL RIG NO. 256

PROJECT Lansing Municipal Airport, N. Quadrant Hangar Development, Lansing, IL
CLIENT Crawford, Murphy & Tilly, Inc., Aurora, Illinois
BORING 9 DATE STARTED 11-12-03 DATE COMPLETED 11-12-03 JOB L-59,265
GROUND SURFACE ELEVATIONS 613.3
END OF BORING 603.3
WATER LEVEL OBSERVATIONS: WHILE DRILLING 0.0'; AT END OF BORING 4.0 '; 24 HOURS

SAMPLE NO.	TYPE	LENGTH RECOVERY	N	WC	Qu	γDRY	DEPTH	ELEV.	SOIL DESCRIPTIONS
							0.9	612.4	11" Black SILTY CLAY (topsoil), very moist
1	SS	HA		23.7	1.26 1.75*		0.9	612.4	Tough brown and black CLAY, trace organic, moist to very moist A-7-6
A				20.8			3.0	610.3	Brown and gray LOAM, very moist ▽A-6 (6) LL/PL/PI = 31/16/15
2	SS	HA		20.0	4.25*		4.5	608.8	Hard brown and gray CLAY LOAM, trace gravel, moist (A-6)
B							5.5	607.8	
3	SS	HA		18.8	2.61 2.5*				Very tough gray CLAY LOAM, trace gravel, moist A-6
4	SS	HA		19.9	2.08 2.0*				

End of Boring at 10.0'

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

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DRILL RIG NO. 256

K:\LansingAp\0329702\draw\sheets\
FILE: boring2.dwg
LAYOUT: Layout1
UPDATE BY: johse
SURVEY BOOK #
DATE: Tue 3/8/05 5:58pm
XREF DWG: tbclnt.dwg
tb.dwg

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS
NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

ENGINEERING INFORMATION - SHEET 2

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	ARM
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

IMAGE FILES:

LA034

K:\LansingAp\0329702\draw\sheets\Intersec
FILE: NewIntersection.dwg
LAYOUT: Layout1
UPDATE BY: johse
SURVEY BOOK #
DATE: Fri 3/18/05 3:14pm
XREF DWG: tbclnt.dwg
tb.dwg
nethgr-base.dwg

NOTES

1. CONTRACTOR SHALL MAINTAIN INTERSECTION TRAFFIC WHEN POWER IS DISRUPTED. (COST OF MAINTENANCE SHALL BE INCIDENTAL TO ITEMS 85000200 AND 89000100)
2. CONTRACTOR SHALL SAWCUT FULL DEPTH LIMITS OF ALL PROPOSED REMOVALS (COST INCIDENTAL TO THE RESPECTIVE PAY ITEM)
3. MATERIAL OBTAINED FROM REMOVAL OPERATIONS SHALL BE HAULED TO A DISPOSAL SITE OFF OF AIRPORT PROPERTY BY THE CONTRACTOR (COST INCIDENTAL TO RESPECTIVE PAY ITEM)

NORTH
0 20 40
SCALE IN FEET

WENTWORTH AVENUE

EXISTING PAVEMENT MARKING TO BE REMOVED ("ONLY" IS TYPICAL OF 2)

STA. 76+64.38 ALONG GLENWOOD–LANSING ROAD
STA. 20+00.00 ALONG WENTWORTH AVENUE

RELOCATE EXISTING SIGNAL HEAD

EXISTING PAVEMENT MARKING TO BE REMOVED (4" LINE)

PROPOSED SAWCUT

REMOVE PANEL

EXISTING CONDUIT TO BE ABANDONED UP TO 5' PAST NEW CURB AND GUTTER

RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT
REMOVE CONCRETE FOUNDATION

REMOVE EXISTING CABLES FROM DUCT
REMOVE 230 SF 10" AVG. P.C.C. PAVEMENT
PROPOSED SAWCUT
PROPOSED SAWCUT
REMOVE 107 LF COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
EXISTING CATCH BASIN TO BE ADJUSTED
REMOVE 2 TRAFFIC SIGNAL HEAD
RELOCATE EXISTING 22' MAST ARM AND VEHICLE PRIORITY SYSTEM. REMOVE CONCRETE FOUNDATION
RELOCATE EXISTING HANDHOLE
RELOCATE EXISTING AWOS POWER PANELS (SEE SHEETS 10 AND 11)
RELOCATE METER HOUSING AND BOX FOR INTERSECTION (SEE SHEETS 10 AND 11)
REMOVE EXISTING 18' POST AND TRAFFIC SIGNAL EQUIPMENT
REMOVE CONCRETE FOUNDATION

EXISTING CATCH BASIN TO BE ADJUSTED
REMOVE COMBINATION CONCRETE CURB AND GUTTER, TYPE M-2.12
REMOVE 12" AVERAGE BITUMINOUS MEDIAN
CONTRACTOR SHALL REMOVE VARIABLE DEPTH OF BITUMINOUS SURFACE FROM MEDIAN (2" AVERAGE)
CENTERLINE OF ROADWAY

GLENWOOD–LANSING ROAD

EXISTING CONDITIONS

LEGEND

NEW PAVEMENT	EXISTING TELEPHONE
NEW BITUMINOUS MEDIAN SURFACE	EXISTING GAS LINE
REMOVE P.C.C. PAVEMENT	EXISTING 6' FENCE
REMOVE MEDIAN SURFACE	EXISTING PROPERTY LINE
EXISTING INLET/MANHOLE	EXISTING LANSING DRAINAGE DITCH
EXISTING FLARED END SECTION	EXISTING WATERMAIN
EXISTING STORM SEWER AND SIZE	EXISTING ITEM TO BE REMOVED OR ABANDONED
EXISTING FIRE HYDRANT	NEW STEEL DUCT, DIRECT BURY
EXISTING ELECTRICAL HANDHOLE	NEW STEEL DUCT, JACKED
EXISTING STEEL DUCT	NEW ELECTRICAL HANDHOLE
EXISTING TRAFFIC SIGNAL POST	NEW TRAFFIC SIGNAL POST
EXISTING MAST ARM ASSEMBLY AND POLE	NEW MAST ARM ASSEMBLY AND POLE
EXISTING SIGNAL HEAD	NEW SIGNAL HEAD
EXISTING SIGNAL HEAD AND BACKPLATE	NEW SIGNAL HEAD AND BACKPLATE
EXISTING CONFIRMATION BEACON	NEW CONFIRMATION BEACON
EXISTING EMERGENCY VEHICLE SYSTEM LIGHT DETECTOR	NEW EMERGENCY VEHICLE SYSTEM LIGHT DETECTOR
EXISTING INTERSECTION CONTROLLER CABINET	NEW ELEVATION (616.30) EXISTING ELEVATION (616.22)
UGE — EXISTING UNDERGROUND COMED ELECTRIC LINE	OVERLAN FLOW DIRECTION
OHE — EXISTING OVERHEAD COMED ELECTRIC LINE	
EXISTING COMED UTILITY POLE	

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

NOTES:

1. COST OF AGGREGATE REMOVAL SHALL BE PAID FOR AS EARTH EXCAVATION (WIDENING).
2. ALL REINFORCEMENT SHALL BE INCIDENTAL TO THE RESPECTIVE PAY ITEM.

GLENWOOD LANSING ROAD

WENTWORTH AVENUE

STA. 76+64.38 ALONG GLENWOOD–LANSING ROAD
STA. 20+00.00 ALONG WENTWORTH AVENUE

NEW LEFT TURN LANE SHALL HAVE 185 LF OF STORAGE AND A 200 LF TAPER
NEW 6" WIDE WHITE DASHED LINE (2' WHITE AND 6' BLANK)
NEW 24" WIDE WHITE STOP LINE
NEW 6" WIDE 183' LONG SOLID WHITE LINE
NEW 10" JOINTED P.C.C. PAVEMENT W/ PAVEMENT FABRIC AND 12" AGGREGATE SUBGRADE
NEW 4" YELLOW SOLID LINE
NEW 205 LF COMBINATION CONCRETE CURB AND GUTTER, TYPE M-2.12
1' STUB AT END OF 10" P.C.C. PAVEMENT
CENTERLINE OF ROADWAY
NEW 4" YELLOW SOLID LINE
NEW TYPE 1 CLOSED LID
NEW 765 S.F. CONCRETE MEDIAN, (SPECIAL) TYPE C-4 (CCHD)
CONTRACTOR SHALL REPLACE BITUMINOUS MEDIAN ALONG COMBINATION CURB AND GUTTER (TYPE M-7 C.C.H.D. STANDARD) PAYMENT SHALL BE UNDER CONCRETE MEDIAN TRANSITION.
PEAK MEDIAN TRANSITION
CONTRACTOR SHALL PLACE BITUMINOUS SURFACE COURSE TO CONSTRUCT A CROWN WITH 1% SIDE SLOPES WITHIN THE MEDIAN.
NEW BITUMINOUS MEDIAN SURFACE
CONTRACTOR SHALL MAINTAIN EXISTING MEDIAN DRAINAGE TO DRAINAGE STRUCTURE

GLENWOOD–LANSING ROAD

EXISTING B-6.24 CONCRETE CURB AND GUTTER
NEW 24" WIDE WHITE STOP LINE
NEW RIGHT-OF-WAY
NEW ARROWS AND "ONLY" MARKINGS LOCATION PER C.C.H.D. DETAIL

NORTH
0 20 40
SCALE IN FEET

ONLY
R3-8R
TYPE 1

54"
30"
GLENWOOD LANSING ROAD
MA-2-5430
TYPE 2

℄ OF ROADWAY
NEW NO. 6 x 30" EPOXY COATED TIE BAR AT 24" CTS.
NEW CONCRETE MEDIAN, TYPE C-4 (CCHD)
NEW 6" SUBBASE GRANULAR MATERIAL, TYPE B
EARTH EXCAVATION (WIDENING)
NEW PAVEMENT FABRIC (STANDARD 420701)
NEW 10" P.C.C. PAVEMENT
NEW 12" AGGREGATE SUBGRADE

SECTION A-A LEFT TURN BAY W/ TYPE C-4 MEDIAN
NOT TO SCALE

SITE PLAN

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

INTERSECTION IMPROVEMENTS
EXISTING CONDITIONS AND SITE PLAN

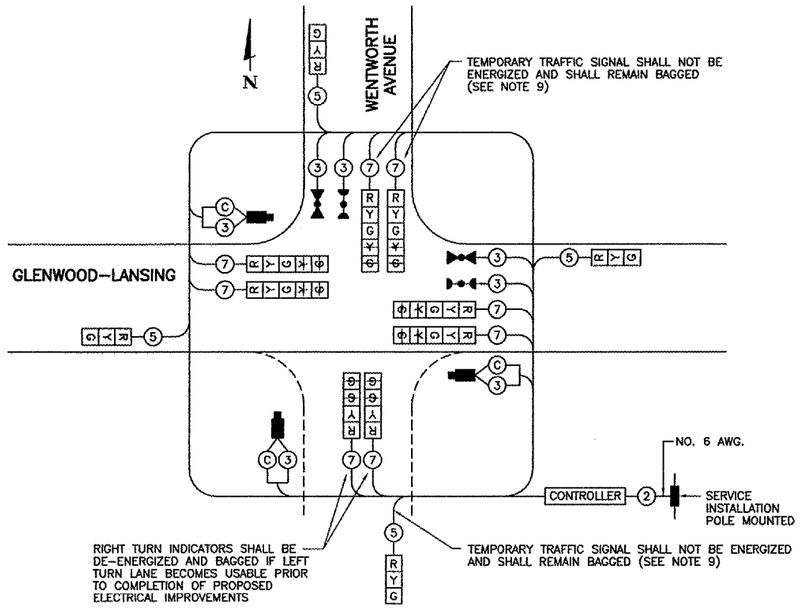
CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SHEET 47 OF 50 SHEETS



TEMPORARY CABLE PLAN

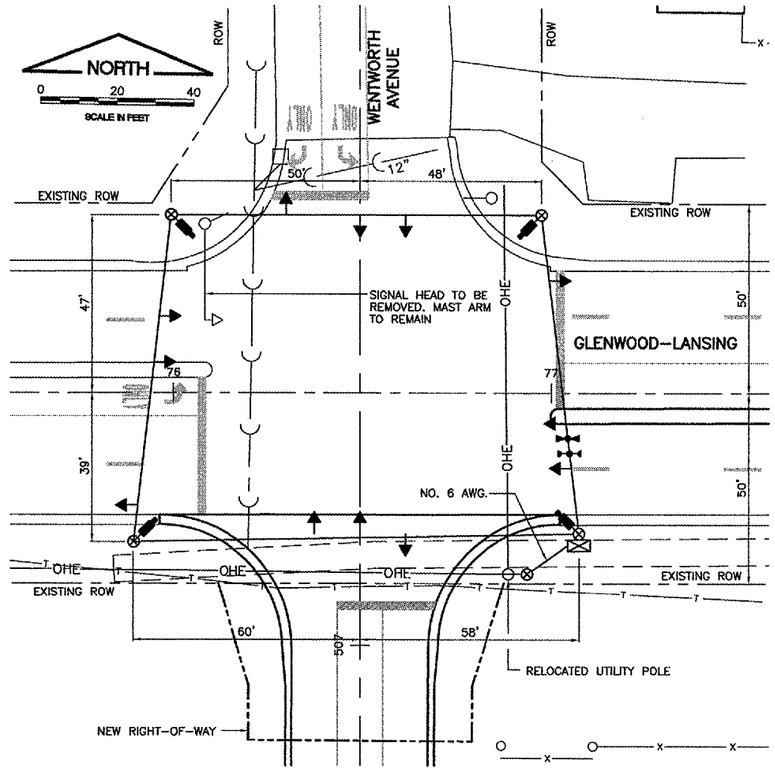
NOT TO SCALE

TEMPORARY TRAFFIC SIGNAL LEGEND

- TEMPORARY SPAN WIRE TETHER WIRE AND CABLE
- EXISTING CONTROL CABINET
- TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED
- TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 POST MINIMUM
- EXISTING DOUBLE HANDHOLE
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- TEMPORARY CONTROLLER CABINET
- MICROWAVE VEHICLE SENSOR/VIDEO DETECTION SYSTEM

EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING VEHICLE LIGHT DETECTOR TO BE REMOVED
- EXISTING CONFIRMATION BEACON TO BE REMOVED
- EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED

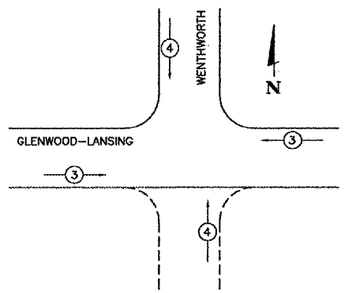


TEMPORARY SIGNAL PLAN

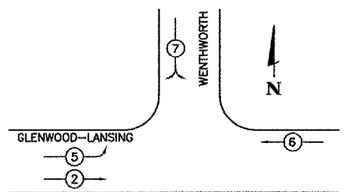
SCALE: 1"=20'

SIGNAL LENSES

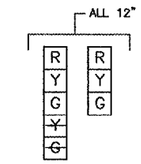
R	RED
Y	YELLOW
G	GREEN
Y	YELLOW TURN INDICATOR
G	GREEN TURN INDICATOR
G	GREEN TURN INDICATOR



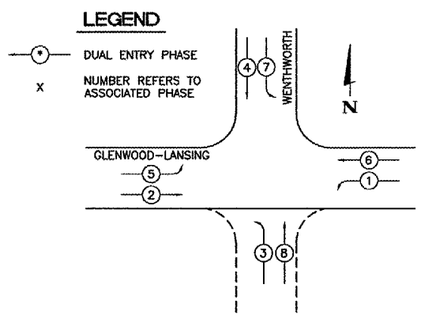
EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM – 1A



SIGNAL FACES



TEMPORARY PHASE DESIGNATION DIAGRAM – 1B

REFERING TO STANDARD 857001

PHASE 1B SHALL BE INCORPORATED INTO SEQUENCE, IF LEFT TURN LANE BECOMES USABLE PRIOR TO COMPLETION OF PROPOSED ELECTRICAL IMPROVEMENTS. (COST INCIDENTAL TO TEMPORARY TRAFFIC CONTROL)

ESTIMATED BILL OF MATERIALS – TEMPORARY

TOTAL	UNIT	DESCRIPTION
1	EACH	8–PHASE CONTROLLER/CABINET WITH ALLIED EQUIPMENT
4	EACH	SIGNAL HEAD, ALUMMINUM, 1–FACE, 3–SECTION
8	EACH	SIGNAL HEAD, ALUMMINUM, 1–FACE, 5–SECTION
850	LIN.FT.	ELECTRIC CABLE OVERHEAD NO 14 – 7/C
450	LIN.FT.	ELECTRIC CABLE OVERHEAD NO 14 – 5/C
830	LIN.FT.	ELECTRIC CABLE OVERHEAD NO 14 – 3/C
190	LIN.FT.	ELECTRIC CABLE OVERHEAD NO 20 – 3/C
50	LIN.FT.	ELECTRIC CABLE 6 AWG – 2/C
800	LIN.FT.	COAXIL CABLE
450	LIN.FT.	MESSENGER WIRE
450	LIN.FT.	TETHER WIRE
4	EACH	WOOD POLE
1	EACH	SERVICE INSTALLATION POLE MOUNTED
4	EACH	VEHICLE VIDEO DETECTOR
2	EACH	EMERGENCY VEHICLE LIGHT DETECTOR
2	EACH	CONFIRMATION BEACON

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE–EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR UNLESS OTHERWISE STATED IN THE PLANS. ON PROJECTS WITH MULTIPLE TEMPORARY TRAFFIC SIGNAL INSTRUCTIONS. ALL CONTROLLERS SHALL BE THE SAME MANUFACTURER BRAND AND MODEL NUMBER WITH CURRENT SOFTWARE INSTALLED.
2. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED INSTALLED IN CABINETS WITH 8 PHASE BACK PANELS. CAPABLE OF SUPPLYING 255 SECONDS OF CYCLE LENGTH AND INDIVIDUAL PHASE LENGTH SETTINGS UP TO 99 SECONDS. ON PROJECTS WITH ONE LANE OPEN AND TWO WAY TRAFFIC FLOW, SUCH AS BRIDGE DECK REPAIRS, TEMPORARY SIGNAL CONTROLLER SHALL BE CAPABLE OF PROVIDING ADJUSTABLE ALL RED CLEARANCE SETTINGS OF UP TO 30 SECONDS IN LENGTH.
3. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL MEET OR EXCEED THE REQUIREMENTS OF SECTION 857 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION WITH REGARDS TO INTERNAL TIME BASE COORDINATION AND PREEMPTION.
4. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE OF THE 12" TYPE. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
5. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES AND RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE.
6. ANY TEMPORARY TRAFFIC SECTIONS NOT IN USE DURING A STAGE OF CONSTRUCTION SHALL BE BAGGED AND REACTIVATED.
7. ALL LABOR AND MATERIAL REQUIRED TO COMPLY WITH THESE REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE BID PRICE OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.
8. TEMPORARY VIDEO DETECTION SYSTEM SHALL BE CONSIDERED AS PART OF THE PAY ITEM "TEMPORARY TRAFFIC SIGNAL INSTALLATION". ALL VIDEO DETECTION ZONES ARE TO BE REDEFINED DURING EACH STAGE OF CONSTRUCTION AND ARE INCIDENTAL TO THE COST OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.
9. CONTRACTOR TO VERIFY LOCATION AND DIRECTION OF MAST ARMS AND CAMERAS.
10. CONTRACTOR SHALL ENERGIZE AND UNBAG LIGHTS. IF LEFT TURN LANE BECOMES OPERATIONAL BEFORE ALL PROPOSED ELECTRICAL IMPROVEMENTS ARE COMPLETED. CONTRACTOR SHALL COORDINATE WITH ENGINEER AND COOK COUNTY ENGINEER.

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SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Thu 10/21/04 1:36pm

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

INTERSECTION IMPROVEMENTS
TEMPORARY SIGNAL INSTALLATION

CMT
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Lansing Municipal airport

DESIGN BY:	DKP
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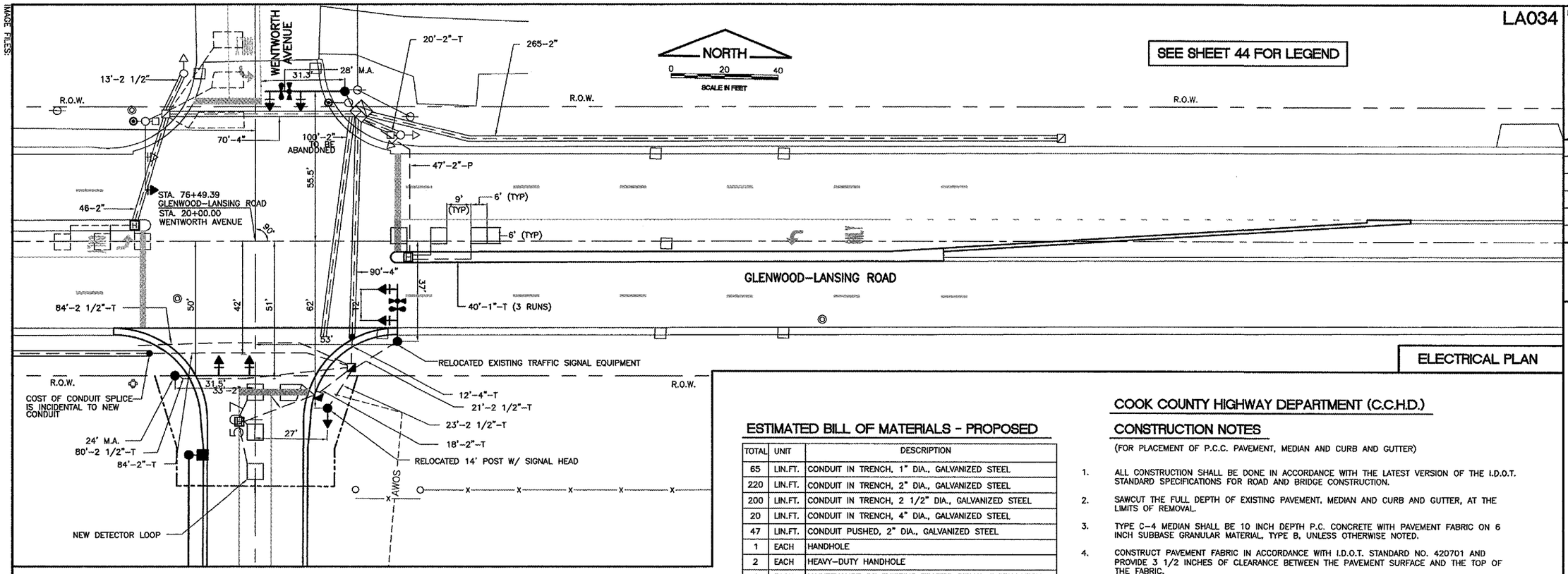
IMAGE FILES:



ELECTRICAL PLAN

COUNTY GENERAL NOTES

1. THE CONTRACTOR SHALL INFORM THE CCHD ENGINEER AT (312) 603-1730 PRIOR TO THE START OF ANY WORK ON THE CONTRACT. A MINIMUM OF FIVE (5) WORKING DAYS ADVANCE NOTICE IS REQUIRED.
2. THE CONTRACTOR SHALL MARK LOCATIONS OF LOOPS AND CONTACT THE COUNTY ENGINEER AT (312) 603-1730 FOR LOCATION APPROVAL PRIOR TO CUTTING OF THE LOOPS. A MINIMUM OF FIVE (5) WORKING DAYS ADVANCED NOTICE IS REQUIRED.
3. ALL MAST ARM MOUNTED SIGNAL HEADS ARE TO BE ATTACHED 2'-0" FROM END OF MAST ARM UNLESS OTHERWISE NOTED.
4. ALL SIGNAL POSTS SHALL BE SET BACK FOUR (4) FEET MINIMUM AND ALL MAST ARM POLES SHALL BE SET BACK SIX (6) FEET MINIMUM FROM THEIR CENTERLINE TO THE BACK OF CURB UNLESS OTHERWISE NOTED. IN NON-CURBED AREAS THE MAST ARM POLE AND SIGNAL POST SHALL BE LOCATED A MINIMUM OF TEN (10) FEET BEHIND THE EDGE OF PAVEMENT OR TWO (2) FEET BEHIND THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER.
5. THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR EXACT LOCATIONS OF THE UTILITIES CALL J.U.L.I.E. TOLL FREE AT (800) 892-0123.
6. IT IS CONTRACTORS' RESPONSIBILITY TO LOCATE EXISTING TRAFFIC SIGNAL CABLES AND CONDUITS.
7. ALL ELECTRIC CABLE TO HAVE POLYVINYL CHLORIDE JACKET.
8. CONDUITS UNDER ROADWAYS AND DRIVEWAYS SHOULD BE INSTALLED IN TRENCH BEFORE PAVEMENT IS PLACED.
9. REFER TO THE IDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION." (RED BOOK) ADOPTED JANUARY 1, 2002 FOR SPECIFICATIONS ASSOCIATED WITH THIS IMPROVEMENT.
10. VEHICLE LOOP DETECTOR SHALL BE COMPATIBLE WITH THE CONTROL EQUIPMENT.
11. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE COOK COUNTY HIGHWAY DEPARTMENT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE COUNTY'S TRAFFIC SIGNAL MAINTENANCE FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.
12. ALL PROPOSED TRAFFIC SIGNALS SHALL BE LED.
13. THE CONTRACTOR SHALL RETROFIT ALL EXISTING TRAFFIC EQUIPMENT TO REMAIN TO LED.

TRAFFIC SIGNAL LEGEND

PROPOSED	EXISTING	
■	⊠	CONTROLLER
⊣	⊣	SERVICE INSTALLATION
←	←	SIGNAL HEAD
←	←	SIGNAL HEAD WITH BACKPLATE
⊣	⊣	SIGNAL HEAD, PEDESTRIAN
●	○	SIGNAL POST
—●	—○	MAST ARM ASSEMBLY AND POLE, STEEL
UD		UNIT DUCT
CT		COMMON TRENCH
▧	▧	HANDHOLE
▣	▣	HEAVY DUTY HANDHOLE
▨	▨	DOUBLE HANDHOLE
— — —	═══	G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)
◉	◎	PEDESTRIAN PUSHBUTTON DETECTOR
□	⊡	DETECTOR LOOP
▶◀	▷◁	EMERGENCY VEHICLE LIGHT DETECTOR
●	⊶	CONFIRMATION BEACON
—●═		CONDUIT SPLICE
⊗	⊗	WOOD POLE

ESTIMATED BILL OF MATERIALS - PROPOSED

TOTAL	UNIT	DESCRIPTION
65	LIN.FT.	CONDUIT IN TRENCH, 1" DIA., GALVANIZED STEEL
220	LIN.FT.	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
200	LIN.FT.	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
20	LIN.FT.	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
47	LIN.FT.	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
1	EACH	HANDHOLE
2	EACH	HEAVY-DUTY HANDHOLE
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
250	LIN.FT.	ELECTRIC CABLE IN CONDUIT, SIGNAL, #14, 3C
650	LIN.FT.	ELECTRIC CABLE IN CONDUIT, SIGNAL, #14, 5C
650	LIN.FT.	ELECTRIC CABLE IN CONDUIT, SIGNAL, #14, 7C
1440	LIN.FT.	ELECTRIC CABLE IN CONDUIT, LEAD-IN, #14 1 PAIR
250	LIN.FT.	ELECTRIC CABLE IN CONDUIT #20 3/C, TWISTED, SHIELDED
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 24FT
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 28FT
45	LIN.FT.	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
1	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
3	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
3	EACH	INDUCTIVE LOOP DETECTOR
350	LIN.FT.	DETECTOR LOOP, TYPE 1
1	EACH	LIGHT DETECTOR AMPLIFIER
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	RELOCATE EXISTING SIGNAL HEAD
2	EACH	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY
1	EACH	MODIFY EXISTING CONTROLLER
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	REMOVE EXISITNG CONCRETE FOUNDATION
6	EACH	LED SIGNAL FACE RETROFIT, YELLOW BALL
6	EACH	LED SIGNAL FACE RETROFIT, RED BALL
6	EACH	LED SIGNAL FACE RETROFIT, GREEN BALL
1	EACH	LED SIGNAL FACE RETROFIT, YELLOW ARROW
1	EACH	LED SIGNAL FACE RETROFIT, GREEN ARROW
2	EACH	LED SIGNAL FACE RETROFIT, WALK SIGNAL
2	EACH	LED SIGNAL FACE RETROFIT, DON'T WALK SIGNAL
1	EACH	RELOCATE EXISTING HANDHOLE

COOK COUNTY HIGHWAY DEPARTMENT (C.C.H.D.)

CONSTRUCTION NOTES

(FOR PLACEMENT OF P.C.C. PAVEMENT, MEDIAN AND CURB AND GUTTER)

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST VERSION OF THE I.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. SAWCUT THE FULL DEPTH OF EXISTING PAVEMENT, MEDIAN AND CURB AND GUTTER, AT THE LIMITS OF REMOVAL.
3. TYPE C-4 MEDIAN SHALL BE 10 INCH DEPTH P.C. CONCRETE WITH PAVEMENT FABRIC ON 6 INCH SUBBASE GRANULAR MATERIAL, TYPE B, UNLESS OTHERWISE NOTED.
4. CONSTRUCT PAVEMENT FABRIC IN ACCORDANCE WITH I.D.O.T. STANDARD NO. 420701 AND PROVIDE 3 1/2 INCHES OF CLEARANCE BETWEEN THE PAVEMENT SURFACE AND THE TOP OF THE FABRIC.
5. DISREGARD ALL DETAILS AND NOTES REGARDING PAVEMENT BLOCKOUTS ON I.D.O.T. STANDARD NO. 420701 AND COMPLY WITH I.D.O.T. STANDARD NO. 420111 AT ALL DRAINAGE/UTILITY STRUCTURE LOCATIONS.
6. WHERE THE PROPOSED PAVEMENT OR TYPE C-4 MEDIAN ABUTS THE EXISTING PAVEMENT LONGITUDINALLY, PROVIDE A TIED LONGITUDINAL CONSTRUCTION JOINT IN ACCORDANCE WITH I.D.O.T. STANDARD NO. 420001, USING 3/4 INCH DIAMETER TIE BARS AT 24 INCH CENTERS.
7. WHERE THE PROPOSED PAVEMENT OR TYPE C-4 MEDIAN ABUTS THE EXISTING PAVEMENT OR TYPE C-4 MEDIAN TRANSVERSELY, PROVIDE A TRANSVERSE JOINT IN ACCORDANCE WITH I.D.O.T. STANDARD NO. 442101, USING 1 1/2 INCH DIAMETER DOWEL BARS AT 12 INCH CENTERS.
8. PROVIDE TRANSVERSE SAWED CONTRACTION JOINTS EVERY 20 FEET IN ACCORDANCE WITH I.D.O.T. STANDARD NO. 420001, USING 1 1/2 INCH DIAMETER DOWEL BARS AT 12 INCH CENTERS AND ALIGN PROPOSED JOINTS WITH EXISTING JOINTS. SAWED, GROOVE AND JOINT SEAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH I.D.O.T. STANDARD 42 0001 (COST INCIDENTAL TO P.C.C. PAVEMENT).
9. IF A PROPOSED TRANSVERSE SAW CUT IS LOCATED LESS THAN 10 FEET FROM AN EXISTING TRANSVERSE JOINT, THEN THE EXISTING PAVEMENT OR TYPE C-4 MEDIAN SHALL BE REMOVED AND REPLACED UP TO THE EXISTING TRANSVERSE JOINT.
10. PAVEMENT PATCHES SHALL BE CLASS B, CONSTRUCTED IN ACCORDANCE WITH I.D.O.T. STANDARD NO. 442101 AND SHALL EXTEND THE FULL WIDTH OF THE EXISTING LANE(S). WHERE PATCHING MORE THAN ONE LANE WIDTH, PROVIDE A TIED LONGITUDINAL JOINT (CONSTRUCTION OR SAWED) BETWEEN LANES, IN ACCORDANCE WITH I.D.O.T. STANDARD NO. 420001. C.C.H.D. CONSTRUCTION NOTE NUMBERS 1 THROUGH 8 SHALL APPLY TO THE CONSTRUCTION OF CLASS B PATCHES.
11. CURB AND GUTTER SHALL BE CONSTRUCTED AND TIED INTO ABUTTING EXISTING OR PROPOSED P.C.C. PAVEMENT IN ACCORDANCE WITH I.D.O.T. STANDARD NUMBERS 606001 AND 420001, USING 3/4 INCH DIAMETER TIE BARS AT 24 INCH CENTERS.
12. CONSTRUCT TYPE C-4 AND TYPE M-7 MEDIANS IN ACCORDANCE WITH THE C.C.H.D. MEDIAN STANDARD.
13. PLACEMENT OF CATCH BASINS WITHIN TYPE M-7 MEDIAN SHALL BE IN ACCORDANCE WITH THE C.C.H.D. "POLICY FOR DRAINING TYPE M-7 MEDIAN" STANDARD.
14. WHERE A MEDIAN OPENING IS PROVIDED, THE PAVEMENT SHALL BE CROWNED AT THE CENTERLINE USING A ONE PERCENT CROSS SLOPE.
15. ALL TRENCHES WITHIN THE COUNTY RIGHT OF WAY SHALL BE BACKFILLED WITH FA-6 SAND IN ACCORDANCE WITH ARTICLE 550.07 OF THE I.D.O.T. STANDARD SPECIFICATIONS. THE BACKFILLING MUST EXTEND UP TO THE PROPOSED SUBBASE IN PAVEMENT SECTIONS. COST SHALL BE INCIDENTAL TO RESPECTIVE PAY ITEM.
16. ALL PAVEMENT MARKING WORK ALONG GLENWOOD-LANSING ROAD SHALL BE PER C.C.H.D. STANDARDS.
17. ALL DISTURBED LAWN AREAS/SHOULDER AREAS WITHIN C.C.H.D. RIGHT-OF-WAY SHALL BE RESTORED WITH 4" TOPSOIL AND SOD PER THE STORM WATER POLLUTION PREVENTION PLAN. PAYMENT SHALL BE UNDER ITEM 905 AND ITEM 908 PER STANDARD SPECIFICATIONS OF CONSTRUCTION OF AIRPORTS.

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UPDATE BY: johse
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DATE: Fri 3/18/05 3:30pm
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tb.dwg
nethgr-base.dwg

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

INTERSECTION IMPROVEMENTS
ELECTRICAL PLAN
AND MISCELLANEOUS DETAILS

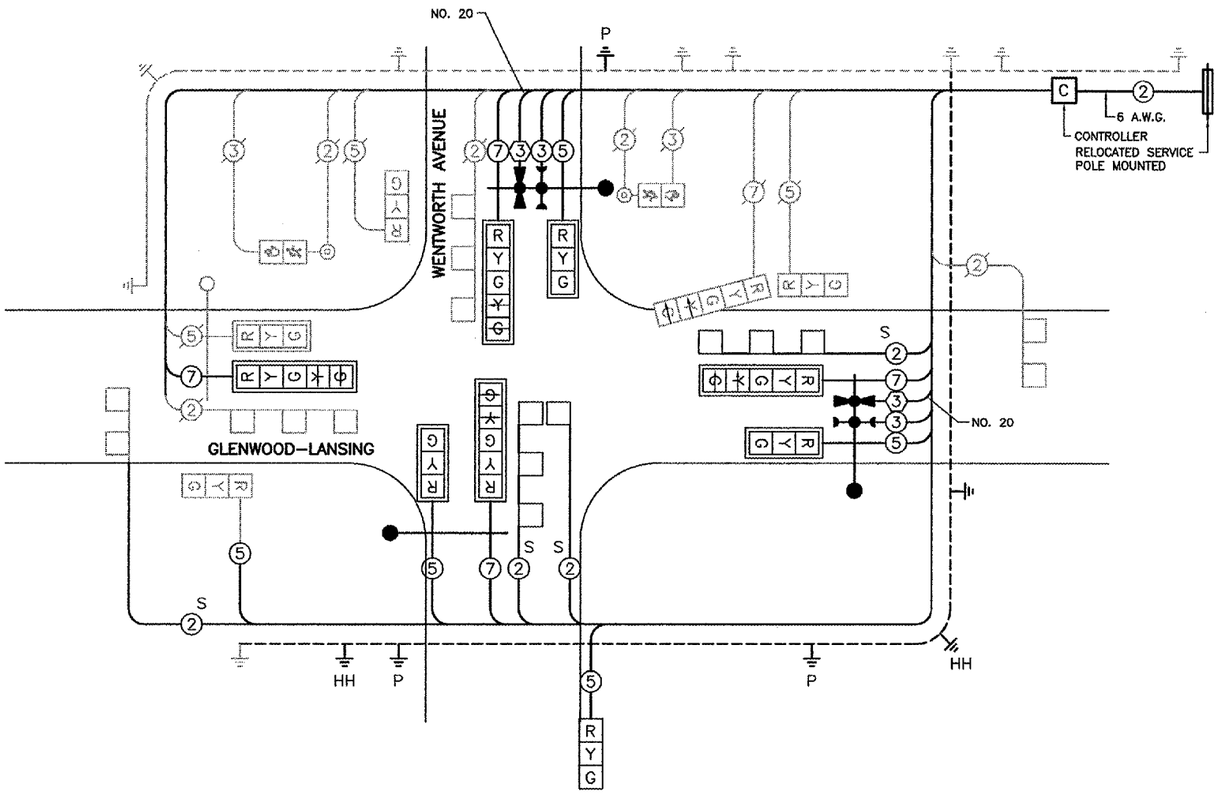
CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	JRL
DRAWN BY:	JRO
CHECKED BY:	
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297-02

IL PROJECT: IGQ-3329
A.I.P. PROJECT: 3-17-0121-B21

SHEET 49 OF 50 SHEETS



CABLE PLAN

N.T.S.

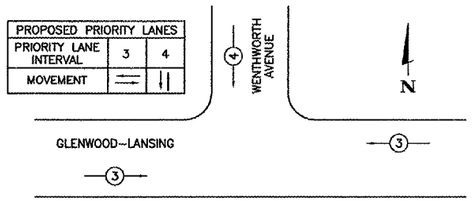
NOTES

1. THIS A SYSTEM GROUND THAT SHALL INTERCONNECT ALL GROUND RODS WITH NO. 6 1/.C SOLID COPPER AWG.
2. ALL ELECTRICAL IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

– IDOT STANDARD 814001	CONCRETE HANDHOLES
– IDOT STANDARD 857001	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
– IDOT STANDARD 877007–02	STEEL MAST ARM ASSEMBLY AND POLE
– IDOT STANDARD 878001–03	CONCRETE FOUNDATION DETAILS
– IDOT STANDARD 880006	TRAFFIC SIGNAL MOUNTING DETAILS
– IDOT STANDARD 880001	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
– IDOT STANDARD 886001	DETECTOR LOOP INSTALLATIONS
– IDOT STANDARD 886006	TYPICAL LAYOUTS FOR DETECTION LOOPS

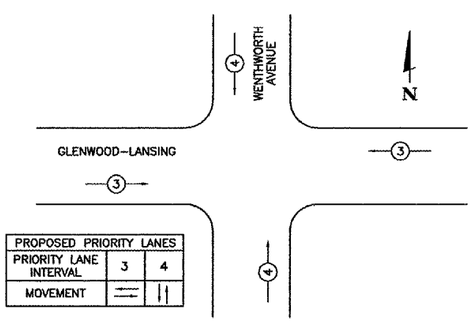
CABLE PLAN LEGEND

R	12" TRAFFIC SIGNAL SECTION
C	CONTROLLER CABINET
	VEHICLE DETECTOR, INCLUDING LOOP
(3)	DENOTES NUMBER OF CONDUCTORS (NEW) ALL LOOP DETECTOR CABLE TO BE TWISTED AND SHIELDED. ALL CABLE NO. 14 EXCEPT AS INDICATED
R Y G ⊀ ⊖	SIGNAL FACE
R Y G ⊀ ⊖	SIGNAL FACE WITH BACKPLATE
	GROUNDING SYSTEM CONNECTION
S	SHIELDED AND TWISTED
	EXISTING SERVICE
	PEDESTRIAN SIGNAL HEAD
	PEDESTRIAN PUSHBUTTON
	EMERGENCY VEHICLE SYSTEM LIGHT DETECTOR
(3)	ELECTRIC CABLE NO. 20 A.W.G.
	CONFIRMATION BEACON



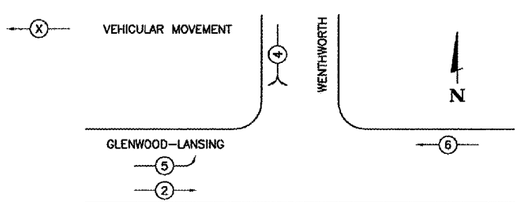
EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE

(N.T.S)



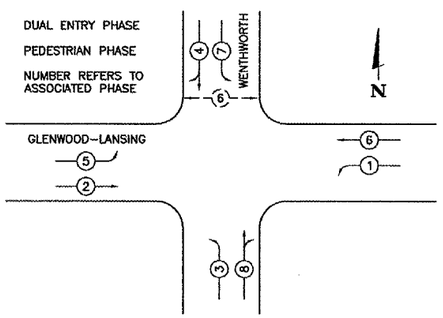
PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

(N.T.S)



EXISTING CONTROLLER SEQUENCE

(N.T.S)



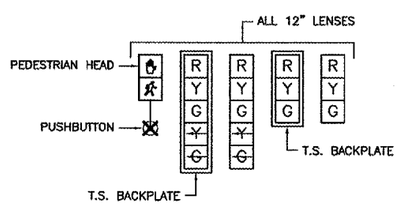
PROPOSED CONTROLLER SEQUENCE

PHASE DESIGNATION DIAGRAM

DUAL ENTRY–ALL LEGS PROTECTED/PERMISSIVE LEFT TURN PHASING
(N.T.S)

SIGNAL LENSES

R	RED
Y	YELLOW
G	GREEN
⊀	YELLOW TURN INDICATOR
⊖	GREEN TURN INDICATOR



SIGNAL FACES

PATH: K:\LansingAp\0329702\draw\sheet
FILE: trafficdtl1.dwg
UPDATE BY: johse
SURVEY BOOK #
XREF DWG:
XREF DWG:
DATE: Thu 10/21/04 11:13am

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

LANSING MUNICIPAL AIRPORT
LANSING, ILLINOIS

NORTH QUADRANT SITEWORK - PHASE 1
AND TAXIWAY G2 EXTENSION

INTERSECTION IMPROVEMENTS
TRAFFIC SIGNAL INSTALLATION

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

Lansing Municipal airport

DESIGN BY:	DKP
DRAWN BY:	JRO
CHECKED BY:	ARM
APPROVED BY:	
DATE:	03/04/05
JOB No:	03297–02

IL PROJECT: IGQ–3329
A.I.P. PROJECT: 3–17–0121–B21