

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	44	1
ILLINOIS CONTRACT NO. 61A27				

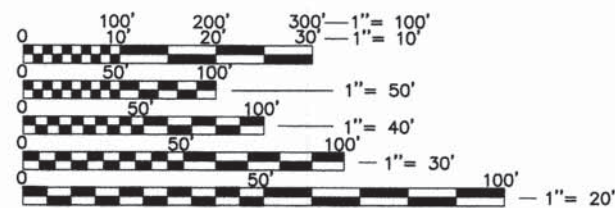
FOR INDEX OF SHEETS, SEE SHEET NO. 2

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FAU 2798
CENTRAL AVENUE/CARPENTER ROAD AT PRATT AVENUE
TRAFFIC SIGNAL, RESURFACING
SECTION: 12-00058-00-TL
PROJECT: M-4003(192)
VILLAGE OF LINCOLNWOOD
COOK COUNTY
C-91-310-13

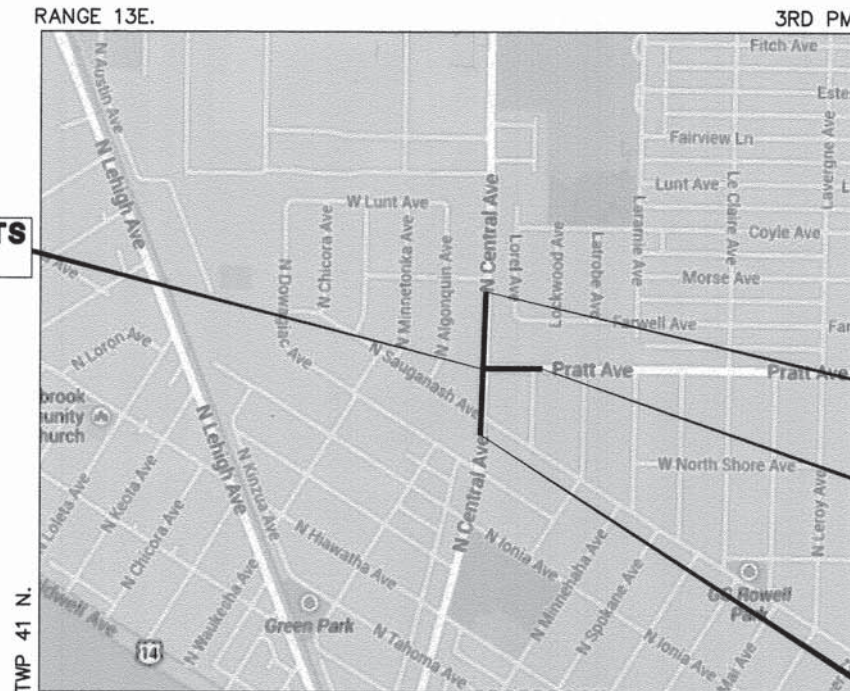
CARPENTER ROAD/CENTRAL AVENUE - MINOR ARTERIAL
ADT = 19,800
POSTED SPEED LIMIT = 35-30 MPH

PRATT AVENUE - MAJOR COLLECTOR
ADT = 8,600
POSTED SPEED LIMIT = 30 MPH



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 OR 811



BEGIN IMPROVEMENTS
STA. 10+00

END IMPROVEMENTS
STA. 10+76

END IMPROVEMENTS
STA. 13+85

BEGIN IMPROVEMENTS
STA. 1+33

LOCATION MAP
(Not to Scale)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED 2/3 2014
J. W. [Signature]
VILLAGE OF LINCOLNWOOD, VILLAGE MANAGER

PASSED FEBRUARY 13 2014
C. J. Holt
DISTRICT ONE ENGINEER OF LOCAL ROADS AND STREETS

RELEASED FOR BID
BASED ON LIMITED REVIEW February 13 2014
John F. [Signature]
DEPUTY DIRECTOR OF HIGHWAYS, REGION ONE ENGINEER

PROFESSIONAL ENGINEER'S SIGNATURE & SEAL
Mr. D. [Signature]
2/3/14 DATE
EXPIRES 11/30/15 SEAL

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OF THE STATE OF ILLINOIS

PROGRAM AND OFFICE ENGINEER: FAWAD AQUEEL, P.E. (847) 705-4021 SCHAUMBURG, IL

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GENERAL NOTES

- A-1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JAN. 1, 2012, THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JAN. 1, 2014, THE DETAILS IN THE PLANS AND SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- A-2. THE STANDARD SPECIFICATIONS, PROJECT SPECIFICATIONS, CONSTRUCTION PLANS AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE TO BE CONSIDERED A PART OF THE CONTRACT.
- A-3. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSION OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.
- A-4. BEFORE ACCEPTANCE BY THE ENGINEER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR HIS REPRESENTATIVES. FINAL PAYMENT WILL BE MADE AFTER ALL OF THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED BY THE ENGINEER AND THE PERMITTING AGENCIES.
- A-5. WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL WILL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF.
- A-6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.

- A-7. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL PROVIDE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER.
- A-8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.
- A-9. CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL AREAS AFFECTED BY EQUIPMENT OR LABORERS TO EXISTING CONDITIONS. CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING ALL NEW WORK UNTIL COMPLETION OF THIS CONTRACT.
- A-10. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

PAVING AND GRADING NOTES

- B-1. ALL PAVEMENT DIMENSIONS ARE TO THE EDGE OF PAVEMENT, UNLESS OTHERWISE INDICATED.
- B-2. PAVING WORK SHALL INCLUDE FINAL SUB-GRADE SHAPING AND PREPARATION, FORMING, PLACEMENT OF BASE COURSE MATERIALS, AND SUBSEQUENT BINDER AND/OR SURFACE COURSES, FINISHING AND CURING OF CONCRETE, FINAL CLEAN-UP AND ALL RELATED WORK.
- B-3. ALL DISTURBED NON-PAVEMENT AREAS SHALL BE ROUGH GRADED. THE CONTRACTOR IS RESPONSIBLE FOR ALL EROSION PREVENTION AND REPAIR.
- B-4. 3/4" THICK PRE-MOLDED FIBER EXPANSION JOINTS WITH 3/4" x 18" PLAIN ROUND, STEEL DOWEL BARS SHALL BE INSTALLED IN ALL CURBS, 1/2" x 12" PLAIN ROUND STEEL DOWEL BARS IN SIDEWALK AT (60') SIXTY FOOT INTERVALS AND AT ALL P.C.'S, P.T.'S, CURB RETURNS. ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. ALL EXPANSION JOINTS MUST BE FREE OF CONCRETE FOR FULL DEPTH. CONTRACTION JOINTS SHALL BE TOOLED AT 5' INTERVALS IN THE SIDEWALK. THE COST OF THESE JOINTS SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT. CONTRACTION JOINTS SHALL ALSO BE TOOLED DOWN THE CENTER OF ALL SIDEWALKS GREATER THAN 6' WIDE. (FIVE FOOT SPACING MAXIMUM).
- B-5. ALL PORTLAND CEMENT CONCRETE SHALL BE CURED AND PROTECTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. TWO COATS OF WHITE CURING COMPOUND SHALL BE APPLIED TO ALL CONCRETE WORK AS SOON AS THE FINISH IS COMPLETE, WITHIN ONE (1) HOUR OF FINAL STRIKING.
- B-6. UNLESS OTHERWISE NOTED, CONCRETE SIDEWALKS SHALL BE 5" THICK (8" THICK THROUGH DRIVEWAYS), SET ON THE 4" CA-6 CRUSHED STONE COMPACTED SUBBASE AND SHALL BE 1/4" ABOVE THE ADJACENT CURB.
- B-7. WHENEVER NEW CONCRETE ABUTS EXISTING CONCRETE, SET A 3/4" THICK PRE-MOLDED FIBER EXPANSION JOINT AND 3/4" IDOT STANDARD EXPANSION ANCHOR TIES IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THIS INCLUDES CONCRETE POURED ADJACENT TO EXISTING SIDEWALKS, CURBS AND BUILDINGS. THE DOWEL BARS SHOULD BE 4" INTO EXISTING CONCRETE WITH 8" EXTENDING INTO NEW CONCRETE. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CURB AND GUTTER PAY ITEM.
- B-8. PRIME COAT FOR THE SURFACE COURSE SHALL BE APPLIED TO THE BINDER AT A RATE OF 0.07 GAL/SY (SS-1). PRIME COAT FOR THE BINDER COURSE SHALL BE APPLIED TO THE SUBBASE AT A RATE OF 0.25 GAL/SY (P.E.P.).
- B-9. ALL CURB AND SIDEWALK SHALL BE REINFORCED WITH TWO #4 REBARS (THREE EQUALLY SPACED REBAR FOR SIDEWALK) WHENEVER THE CURB OR SIDEWALK CROSSES A UTILITY TRENCH. EXTEND THE REBAR TEN FEET BEYOND THE TRENCH ON BOTH SIDES.
- B-10. ALL SIGN POSTS SHALL CONFORM TO IDOT, COUNTY AND VILLAGE STANDARDS. EXISTING SIGNS SHALL BE TEMPORARILY RELOCATED DURING CONSTRUCTION.
- B-11. WHEN REMOVING CURB, SIDEWALK OR PAVEMENT, SAW CUT SHALL BE FULL DEPTH OF OF THE ITEM BEING REMOVED. THE COST OF SAWCUTTING SHALL BE INCLUDED IN THE ITEM BEING REMOVED.

ENVIRONMENTAL

- C-1. THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND FOR WORKERS PROTECTION.
- C-2. ANY WASTE GENERATED AS SPECIAL WASTE OR A WASTE NOT CERTIFIED AS A NON-SPECIAL WASTE FROM THE PROJECT SHOULD BE MANIFESTED OFF-SITE USING THE GENERATOR NUMBER ASSOCIATED WITH COOK COUNTY. THE GENERATOR NUMBER FOR COOK COUNTY IS 0318995023.

STATE STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-07	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424011-01	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
424021-02	DEPRESSED CORNER FOR SIDEWALKS
442201-03	CLASS C & D PATCHES
604051-03	FRAME AND GRATE TYPE 11
606001-05	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM EDGE OF PAVEMENT
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701427-02	LN CLOSURE, MULT, INTERMITTENT OR MOVING OPER., FOR SPEEDS < 40MPH
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701606-09	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-09	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-03	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
729001-01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
805001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
814001-02	HANDHOLE
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTIBLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877001-05	STEEL MAST ARM ASSEMBLY AND POLE, 16' THROUGH 55'
878001-09	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS

DISTRICT DETAILS

- BD400-05 BD32
 BM-20
 TC-10
 TC-13
 TC-16
 TC-22
 TC-24A
 TC-24B
 TC-24C

LEGEND

EXISTING	FEATURE	PROPOSED
BM/TBM	BENCHMARK	BM/TBM
□	CONCRETE R.O.W. MONUMENT	□
---	R.O.W. LINE	---
⊖	STORM SEWER	⊖
⊙	STORM SEWER MANHOLE	⊙
○	CATCH BASIN	○
□	INLET	□
○ C.G.	CLEAN OUT	○ C.G.
---	SANITARY SEWER	---
---	SANITARY FORCEMAIN	---
---	COMBINED SEWER	---
⊙	SANITARY SEWER MANHOLE	⊙
⊙	WATER VAULT	⊙
⊙	VALVE BOX	⊙
W	WATERMAIN	W
⊙ GAS	FIRE HYDRANT	⊙ GAS
△ GAS	GAS MANHOLE	△ GAS
G	GAS VALVE	G
T	GAS MAIN	T
⊖	TELEPHONE LINES	⊖
⊖	IBT BOX	⊖
⊖	IBT MANHOLE	⊖
E	ELECTRIC LINES	E
⊙ ELEC.	ELECTRIC MANHOLE	⊙ ELEC.
○	UTILITY POLE	○
+	SIGN	+
⊕	LIGHT STANDARD	⊕
---	FENCE	---
○	TREE	○
---	SHRUB	---
857	CONTOUR LINE	857
x 854.7	SPOT GRADE	x 857.4
---	HEADWALL	---
---	FLARED END SECTION	---
---	CULVERT	---
---	SWALE	---
•	PROPERTY PIN	•
⊖	STORM SEWER STRUCTURE ELEVATION	⊖
⊙	SANITARY SEWER STRUCTURE ELEVATION	⊙
⊙	WATER MAIN STRUCTURE ELEVATION	⊙

THE RESIDENT ENGINEER SHALL CONTACT THE NORTH COOK AREA TRAFFIC FIELD ENGINEER OR TECHNICIAN @ 773-685-8386 AT LEAST (2) WEEKS PRIOR TO PLACING PERMANENT PAVEMENT MARKINGS

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT (847)705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK

850 Forest Edge Drive
 Vernon Hills, IL 60061
 (847) 499-2000
 CHA GEVAULT HAMILTON ASSOCIATES, INC.

FILE NAME = 9232.407-DT1.dwg	USER NAME = BRIAN WESOLOWSKI	DESIGNED - BJW	REVISED - -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, GENERAL NOTES, STATE STANDARDS, STANDARD SYMBOLS	FAU RTE 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 2	
PLOT SCALE = -	CHECKED - SDB	REVISED - -	SCALE NONE			SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	CONTRACT # 61A27		ILLINOIS FED. AID PROJECT	
PLOT DATE = 1/31/14	DATE - 1/31/14	REVISED - -									

SUMMARY OF QUANTITIES

Special Provision	Code #	Item	Unit	Total Quantity	Specialty Item
	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	44	
	20101100	TREE TRUNK PROTECTION	EACH	4	
	20101200	TREE ROOT PRUNING	EACH	4	*
	20200100	EARTH EXCAVATION	CU YD	500	
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	75	
	20800150	TRENCH BACKFILL	CU YD	4	
	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	1,450	*
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	20	*
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	20	*
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	20	*
	25200110	SODDING, SALT TOLERANT	SQ YD	1,450	*
	25200200	SUPPLEMENTAL WATERING	UNIT	45	*
	28000400	PERIMETER EROSION BARRIER	FOOT	290	
	28000510	INLET FILTERS	EACH	12	
	30300001	AGGREGATE SUBGRADE IMPROVEMENT	CU YD	75	
	35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	2,350	
	35400400	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 9"	SQ YD	475	
	40200300	AGGREGATE SURFACE COURSE, TYPE A 4"	SQ YD	50	
	40300100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	1,000	
	40600300	AGGREGATE (PRIME COAT)	TON	10	
	40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	175	
	40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	500	
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	175	
	40603340	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70	TON	454	
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	4,750	
	44000100	PAVEMENT REMOVAL	SQ YD	300	
	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	725	
	44000300	CURB REMOVAL	FOOT	75	
	44000500	COMBINATION CONCRETE CURB AND GUTTER REMOVAL	FOOT	2,167	
	44000600	SIDEWALK REMOVAL	SQ FT	2,000	
	44201299	DOWEL BARS 1 1/2"	EACH	1,075	
	44201785	CLASS D PATCHES, TYPE I, 12 INCH	SQ YD	50	
	44201789	CLASS D PATCHES, TYPE II, 12 INCH	SQ YD	100	
	44201794	CLASS D PATCHES, TYPE III, 12 INCH	SQ YD	150	
	44201796	CLASS D PATCHES, TYPE IV, 12 INCH	SQ YD	170	
	550B2310	STORM SEWERS, RUBBER GASKET, CLASS B, TYPE 1, 10"	FOOT	13	
*	56103000	DUCTILE IRON WATER MAIN 6"	FOOT	10	*
*	56103200	DUCTILE IRON WATER MAIN 10"	FOOT	40	*
*	56103300	DUCTILE IRON WATER MAIN 12"	FOOT	10	*
*	56400500	FIRE HYDRANTS TO BE REMOVED	EACH	2	*
*	56400820	FIRE HYDRANT WITH AUXILIARY VALVE AND VALVE BOX	EACH	2	*
	60207905	CATCH BASINS, TYPE C, TYPE 11 FRAME AND GRATE	EACH	1	
	60250200	CATCH BASINS TO BE ADJUSTED	EACH	3	
	60251520	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 11 FRAME AND GRATE	EACH	3	

Special Provision	Code #	Item	Unit	Total Quantity	Specialty Item
	60255500	MANHOLES TO BE ADJUSTED	EACH	1	
	60257900	MANHOLES TO BE RECONSTRUCTED	EACH	1	
	60260400	INLETS TO BE ADJUSTED WITH NEW TYPE 1 FRAME, CLOSED LID	EACH	1	
	60265700	VALVE VAULTS TO BE ADJUSTED	EACH	1	
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	1,461	
	60603900	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 AEP	FOOT	25	
*	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	240	*
	66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	*
	66900530	SOIL DISPOSAL ANALYSIS	EACH	2	*
	67100100	MOBILIZATION	L SUM	1	
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	
	70300100	SHORT TERM PAVEMENT MARKING	FOOT	1,000	
	72000100	SIGN PANEL - TYPE 1	SQ FT	20	*
	72000200	SIGN PANEL - TYPE 2	SQ FT	49	*
	72300100	INSTALL EXISTING SIGN PANEL	SQ FT	100	*
	72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	70	*
	72400320	REMOVE SIGN PANEL - TYPE 2	SQ FT	55	*
	72900100	METAL POST - TYPE A	FOOT	26	*
	72900200	METAL POST - TYPE B	FOOT	90	*
	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	146	*
	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2,922	*
	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	720	*
	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	237	*
	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	101	*
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	170	
	80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1	*
	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	641	*
	81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	19	*
	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	49	*
	81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	281	*
	81400100	HANDHOLE	EACH	4	*
	81400200	HEAVY-DUTY HANDHOLE	EACH	1	*
	81400300	DOUBLE HANDHOLE	EACH	2	*
*	84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	4	*
	84200804	REMOVAL OF POLE FOUNDATION	EACH	4	*
**	85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1	*
	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	433	*
	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	855	*
	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	913	*
	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,081	*
	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1,356	*

** SUPER P CABINET

850 Forest Edge Drive
 Vernon Hills, IL 60061
 PH: 847.489.7000
 FAX: 847.489.7001
GHA GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = 9232.407-DT1.dwg

USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = --
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

REVISED - --
 REVISED - --
 REVISED - --
 REVISED - --

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE NONE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	3
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

Special Provision	Code #	Item	Unit	Total Quantity	Specialty Item
	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	57	*
	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	387	*
	87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1	*
	87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2	*
	87700150	STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	2	*
	87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1	*
	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	12	*
	87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4	*
	87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30	*
	88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	3	*
	88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2	*
	88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1	*
	88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2	*
	88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1	*
	88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1	*
	88030250	SIGNAL HEAD, LED, 2-FACE, 1-4 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1	*
	88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4	*
	88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	6	*
	88500100	INDUCTIVE LOOP DETECTOR	EACH	6	*
	88700200	LIGHT DETECTOR	EACH	2	*
	88700300	LIGHT DETECTOR AMPLIFIER	EACH	1	*
	88800100	PEDESTRIAN PUSH-BUTTON	EACH	4	*
	89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	*
	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	*
	89502380	REMOVE EXISTING HANDHOLE	EACH	5	*
	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	5	*
	A2008320	TREE, TILIA TOMENTOSA (SILVER LINDEN), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	4	*
*	X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	386	*
*	X0327611	REMOVE AND REINSTALL BRICK PAVER	SQ FT	225	
*	X4230710	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT 6 INCH, SPECIAL	SQ YD	725	
*	X4240800	DETECTABLE WARNINGS (SPECIAL)	SQ FT	70	
*	X4400196	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	SQ YD	4,700	
*	X5610710	WATER MAIN REMOVAL, 10"	FOOT	10	*
*	X5610712	WATER MAIN REMOVAL, 12"	FOOT	10	*
*	X5630010	CUT AND CAP EXISTING 10" WATER MAIN	EACH	2	*
*	X5630710	CONNECTION TO EXISTING WATER MAIN 10"	EACH	2	*
*	X5630712	CONNECTION TO EXISTING WATER MAIN 12"	EACH	2	*
*	X6061700	COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL)	FOOT	662	
*	X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1	*
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	
*	Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	80	
	Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	1	*
	Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	*
Δ *	Z0076600	TRAINEES	HOUR	500	
Δ *	Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	

Δ 0042

CHAMBERLAIN ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 TEL: (847) 438-2000
 FAX: (847) 438-2001

FILE NAME = 9232.407-DT1.dwg

USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = --
 PLOT DATE = 1/31/14

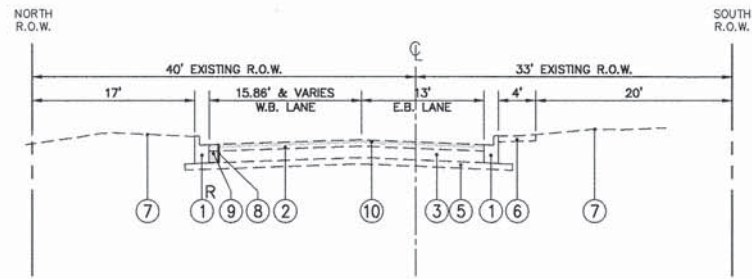
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 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

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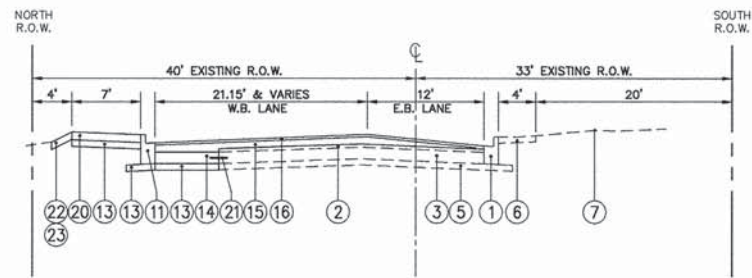
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
 SCALE NONE SHEET NO. 2 OF 2 SHEETS STA. TO STA.

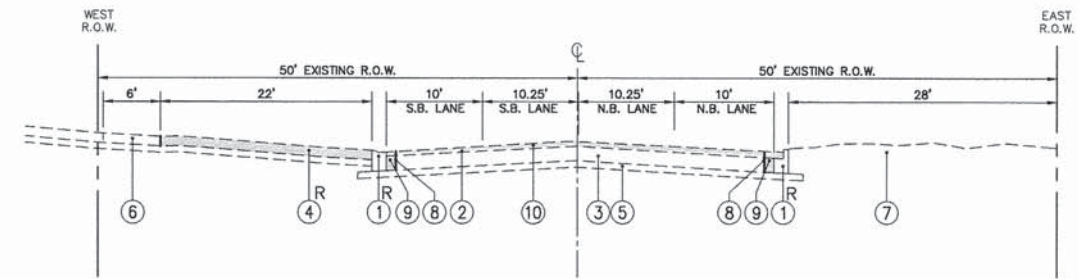
FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	4
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



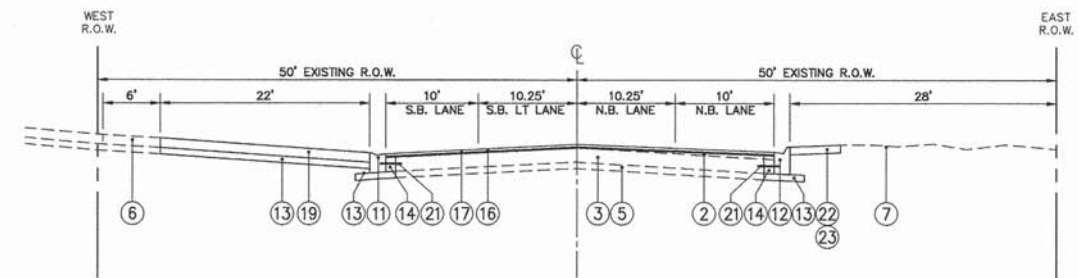
EXISTING TYPICAL SECTION
STA. 10+00 TO STA. 13+71 PRATT AVENUE



PROPOSED TYPICAL SECTION
STA. 10+00 TO STA. 13+71 PRATT AVENUE



EXISTING TYPICAL SECTION
STA. 1+33 TO STA. 10+76 CENTRAL AVENUE



PROPOSED TYPICAL SECTION
STA. 1+33 TO STA. 10+76 CENTRAL AVENUE

HOT-MIX ASPHALT MIXTURE REQUIREMENTS		
MIXTURE TYPE	AIR VOIDS @ Ndes	DEPTH
HOT-MIX ASPHALT RESURFACING - CENTRAL		
HOT-MIX ASPHALT SURFACE COURSE, MIX 'D', N70 (IL 9.5 mm)	4% @ 70 GYR	1½"
LEVELING BINDER (MACHINE METHOD), N70 (IL 9.5 mm)	4% @ 70 GYR	¾"
HOT-MIX ASPHALT RESURFACING - PRATT		
HOT-MIX ASPHALT SURFACE COURSE, MIX 'D', N70 (IL 9.5 mm)	4% @ 70 GYR	1½"
HOT-MIX ASPHALT BINDER COURSE, IL 19.0, N50	4% @ 50 GYR	2¼"
HOT-MIX ASPHALT PATCHING		
CLASS D PATCH (HMA BINDER IL-19mm)	4% @ 70 GYR	12" (IN 4 LIFTS)

THE UNIT WEIGHT TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SY/IN

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

FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

LEGEND:

- ① EXISTING B6.12 CURB & GUTTER
- ② EXISTING BITUMINOUS PAVEMENT OVERLAY, 4" & VARIES
- ③ EXISTING PORTLAND CEMENT BASE COURSE, 9" & VARIES
- ④ EXISTING DRIVEWAY
- ⑤ EXISTING AGGREGATE SUB-BASE
- ⑥ EXISTING SIDEWALK
- ⑦ EXISTING GROUND
- ⑧ PROPOSED SAWCUT EXISTING PAVEMENT
- ⑨ PROPOSED FULL DEPTH PAVEMENT REMOVAL
- ⑩ PROPOSED HOT MIX ASPHALT SURFACE REMOVAL, 2.25" & VARIES
- ⑪ PROPOSED COMB. CONC CURB AND GUTTER TYPE B-6.12
- ⑫ PROPOSED COMB. CONC CURB AND GUTTER TYPE B-4.12
- ⑬ PROPOSED AGGREGATE BASE COURSE, TYPE B, 4"
- ⑭ PROPOSED PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, 9"
- ⑮ PROPOSED HOT MIX ASPHALT BINDER COURSE, IL 19.0, N50, 2.25" & VARIES
- ⑯ PROPOSED HOT MIX ASPHALT SURFACE COURSE, MIX "D", N70, 1½"
- ⑰ PROPOSED LEVELING BINDER (MACHINE METHOD) N70, ¾"
- ⑱ PROPOSED STRIP REFLECTIVE CRACK CONTROL TREATMENT
- ⑲ PROPOSED P.C.C. DRIVEWAY PAVEMENT, 6" (RESIDENTIAL)
HMA DRIVEWAY, 6" (RESIDENTIAL)
HMA DRIVEWAY, 8" (COMMERCIAL)
- ⑳ PROPOSED P.C.C. SIDEWALK, 5"
PCC SIDEWALK, 6" AT RESIDENTIAL DRIVEWAYS
- ㉑ PROPOSED NO. 12 EPOXY COATED TIE BAR
- ㉒ PROPOSED SODDING, SALT TOLERANT
- ㉓ PROPOSED TOPSOIL FURNISH AND PLACE 4"
- ^R ITEM TO BE REMOVED

GEVAULT HAMILTON
 ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 Pk. (847) 438-9200
 Fax: (847) 438-9201

FILE NAME = 9232.407-DT1.dwg

USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = --
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

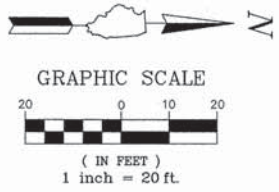
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

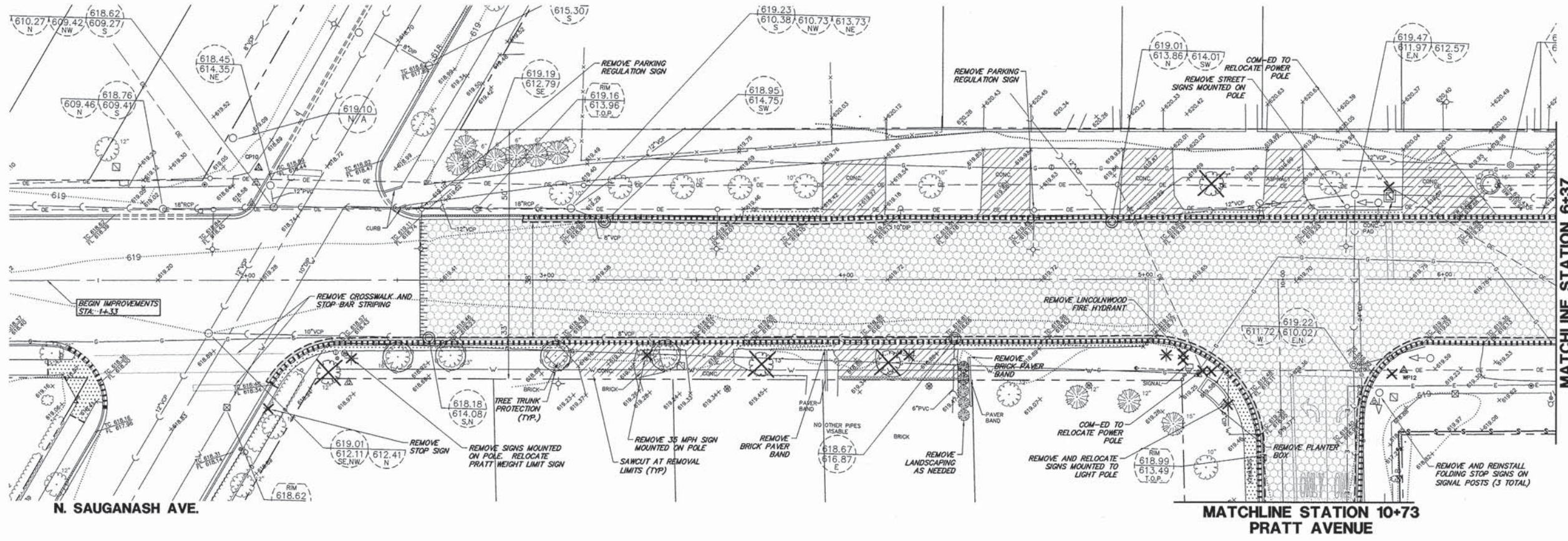
SCALE NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
279B	12-00058-00-TL	COOK	41	5
CONTRACT #			61A27	
ILLINOIS FED. AID PROJECT				



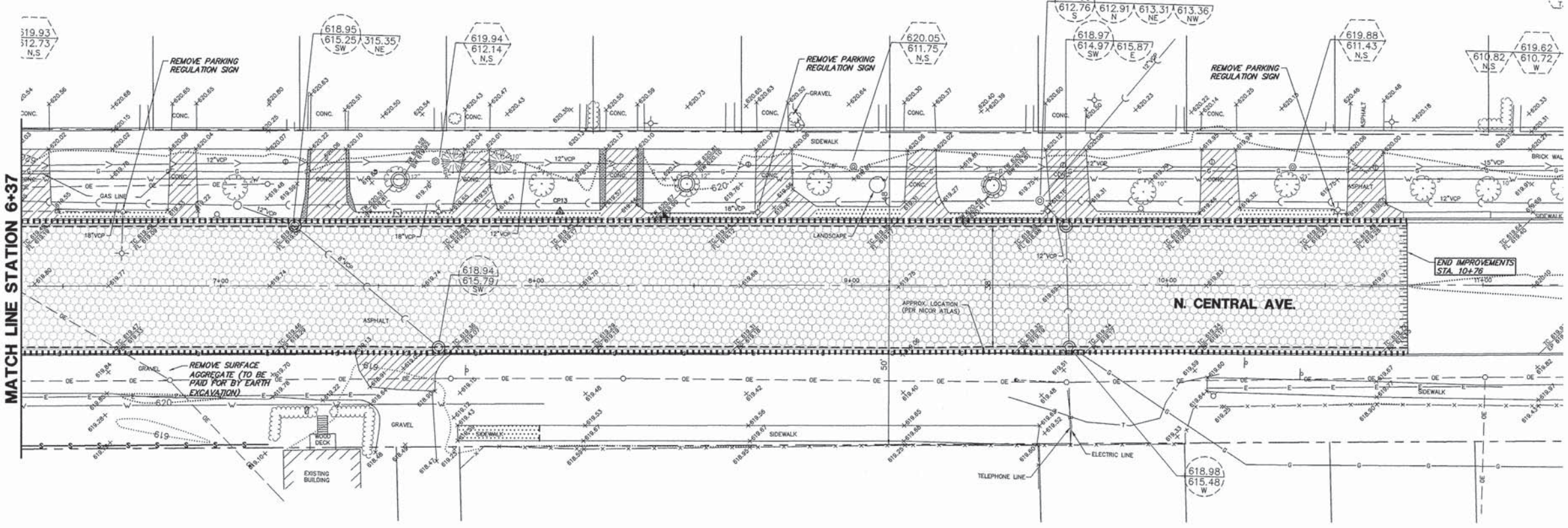
DEMOLITION LEGEND

- REMOVE AND REINSTALL BRICK PAVEMENT
- PAVEMENT REMOVAL
- HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
- SIDEWALK REMOVAL
- DRIVEWAY PAVEMENT REMOVAL
- COMBINATION CURB & GUTTER REMOVAL
- BUTT JOINT
- SAWCUT FULL DEPTH
- UTILITY TO BE REMOVED
- PERIMETER EROSION BARRIER
- INLET FILTER
- UTILITY STRUCTURE TO BE REMOVED
- TREE REMOVAL



N. SAUGANASH AVE.

MATCHLINE STATION 10+73
PRATT AVENUE



MATCH LINE STATION 6+37

N. CENTRAL AVE.

CHA GEWALT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 PH: (847) 428-2000
 FAX: (847) 428-2000

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=20'
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
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 DATE - 1/31/14

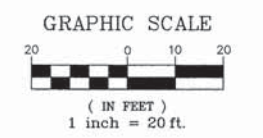
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DEMOLITION PLAN
 INTERSECTION AND SIGNAL IMPROVEMENTS**

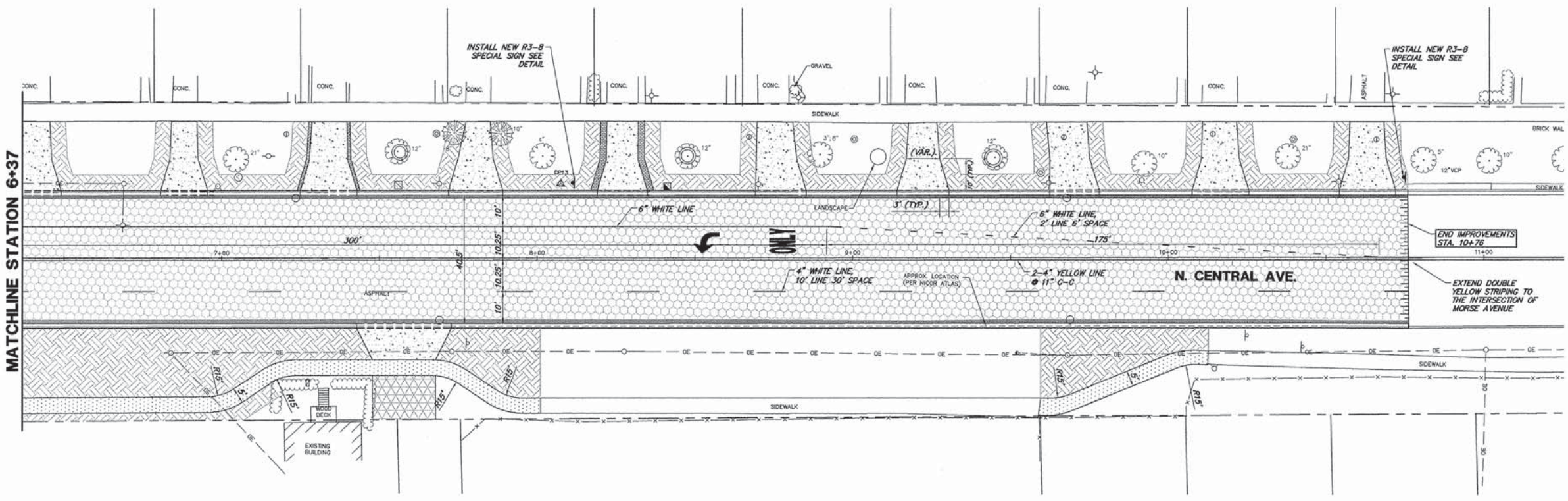
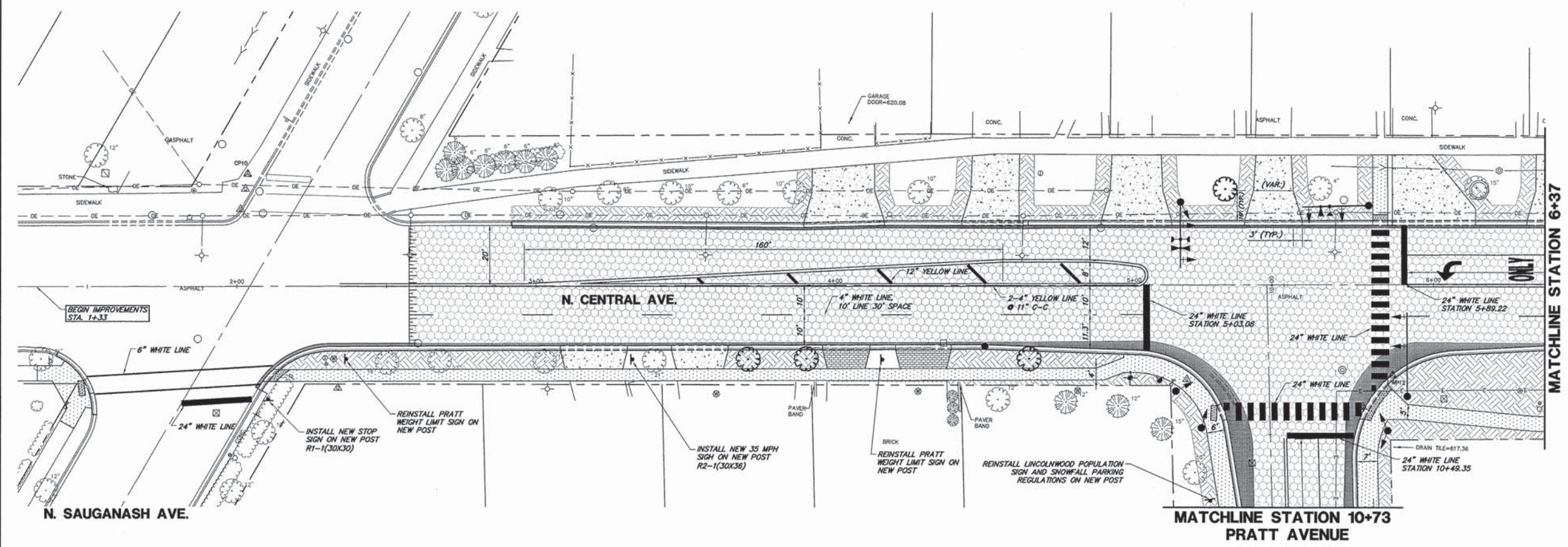
SCALE: 1"=20' SHEET NO. 1 OF 2 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	6
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



GEOMETRIC & PAVING LEGEND

- PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH, SPECIAL
- PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 9 INCH
- HOT-MIX ASPHALT RESURFACING (SEE TYPICAL SECTIONS)
- PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, 6 INCH THROUGH DRIVEWAYS
- REMOVE AND REINSTALL BRICK PAVER
- TOPSOIL FURNISH & PLACE, 4 INCH & SODDING, SALT TOLERANT
- COMBINATION CONCRETE CURB & GUTTER TYPE B6.12 & B4.12
- DEPRESSED COMBINATION CONCRETE CURB & GUTTER
- PROPOSED TREE SILVER LINDEN, 2.5" CALIPER



R3-8 SPECIAL
36" x 36"

CHA GEWALT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 TEL: (847) 439-2000
 FAX: (847) 439-2000

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 PLOT SCALE = 1"=20'
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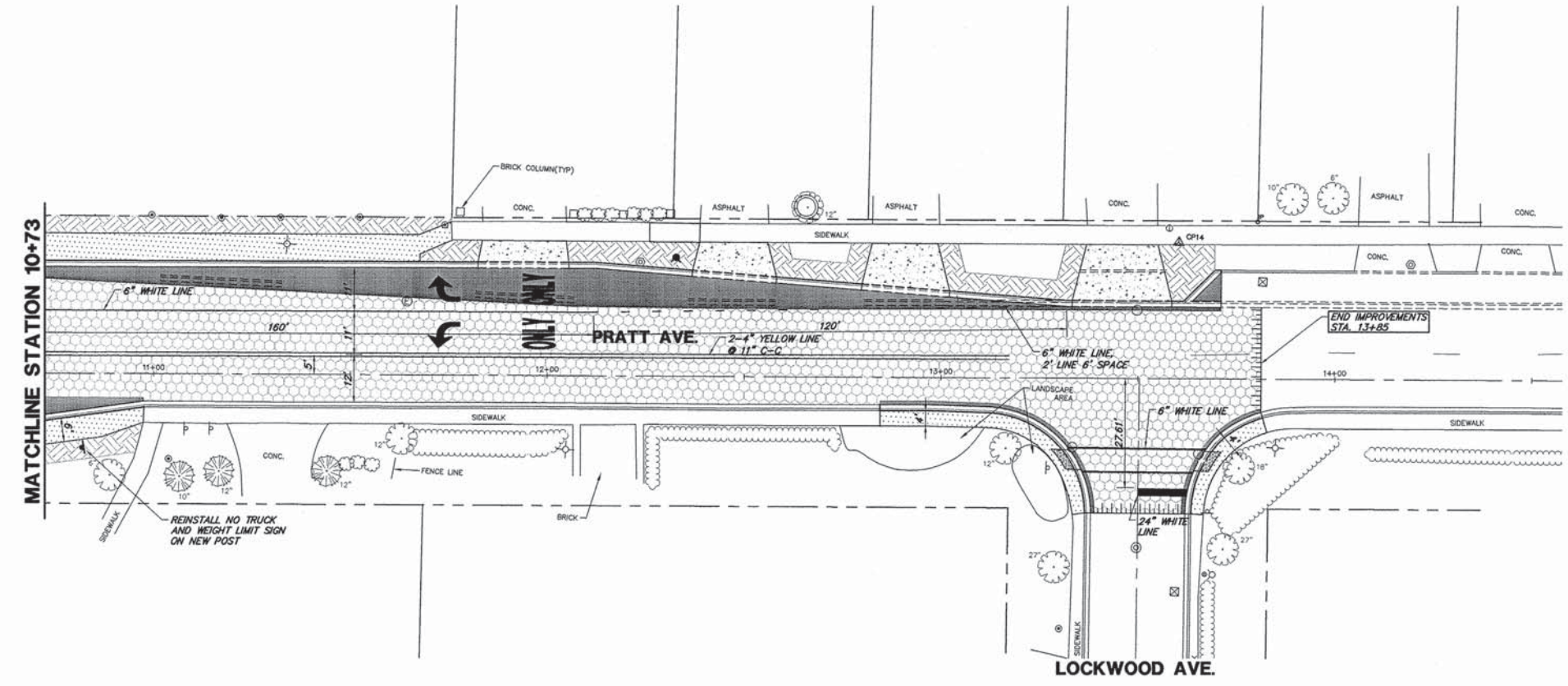
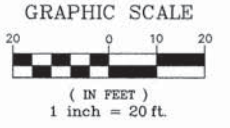
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GEOMETRIC AND PAVEMENT MARKING PLAN
 INTERSECTION AND SIGNAL IMPROVEMENTS**

SCALE 1"=20' SHEET NO. 1 OF 2 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
279B	12-00058-00-TL	COOK	41	8
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



GEOMETRIC & PAVING LEGEND

- PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 6 INCH, SPECIAL
- PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 9 INCH
- HOT-MIX ASPHALT RESURFACING (SEE TYPICAL SECTIONS)
- PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, 6 INCH THROUGH DRIVEWAYS
- REMOVE AND REINSTALL BRICK PAVER
- TOPSOIL FURNISH & PLACE, 4 INCH & SODDING, SALT TOLERANT
- COMBINATION CONCRETE CURB & GUTTER TYPE B6.12 & B4.12
- DEPRESSED COMBINATION CONCRETE CURB & GUTTER
- PROPOSED TREE SILVER LINDEN, 2.5" CALIPER

CHA GEWALT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 P.O. Box 8897, Vernon Hills, IL 60061

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=20'
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

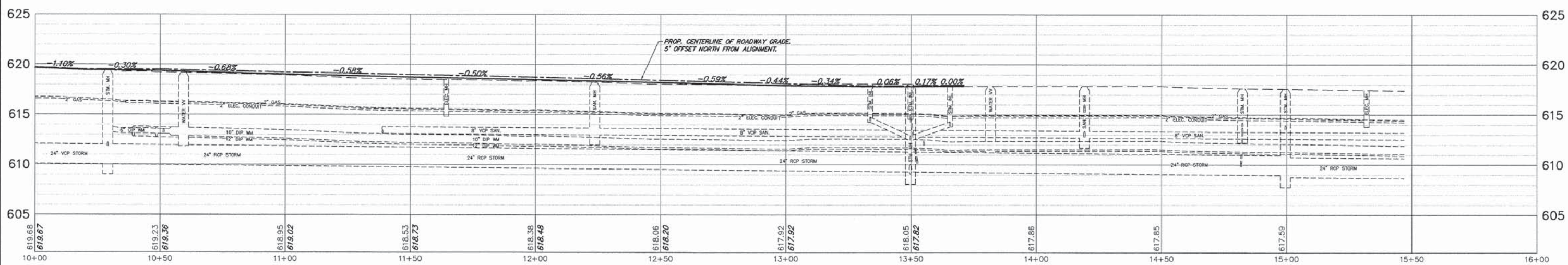
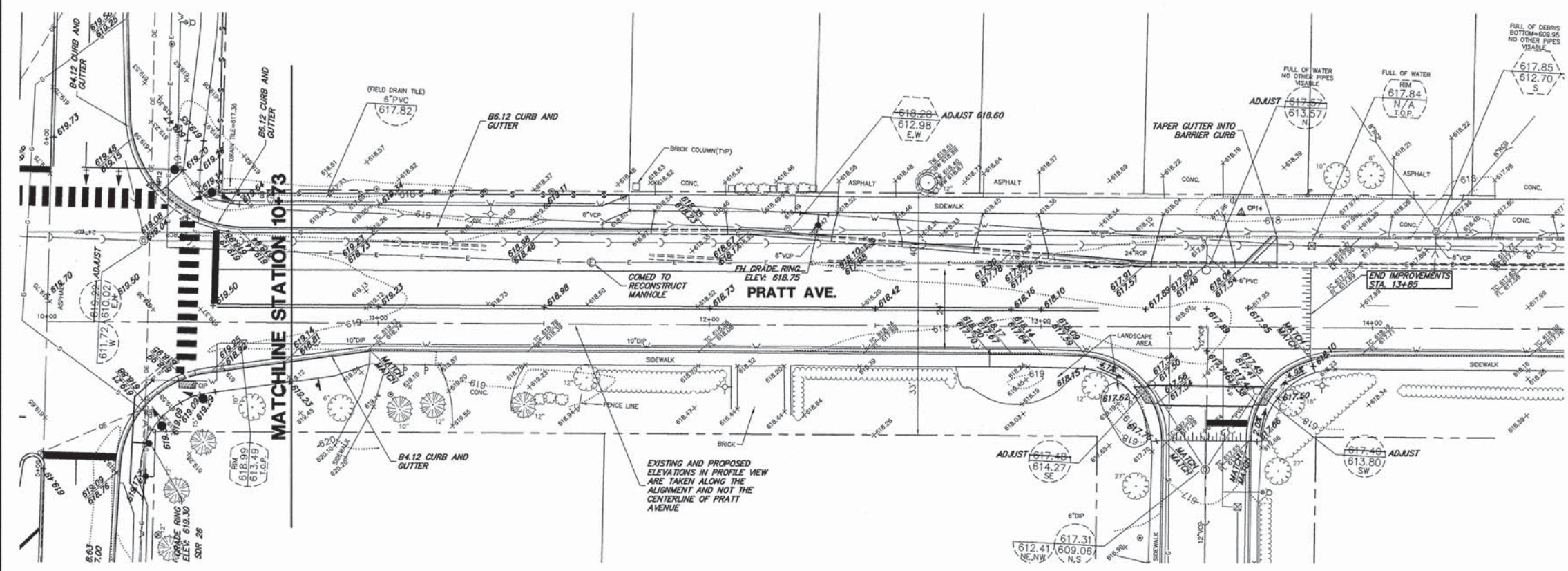
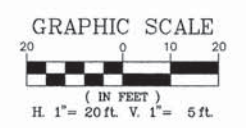
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GEOMETRIC AND PAVEMENT MARKING PLAN
 INTERSECTION AND SIGNAL IMPROVEMENTS**

SCALE: 1"=20' SHEET NO. 2 OF 2 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	9
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



CHA GEVAULT HAMILTON ASSOCIATES, INC. 850 Forest Edge Drive Vernon Hills, IL 60061 P.O. Box 887, Vernon Hills, IL 60061

FILE NAME = 9232.407 PR-1.dwg
USER NAME = BRIAN WESOLOWSKI
PLOT SCALE = 1"=20'
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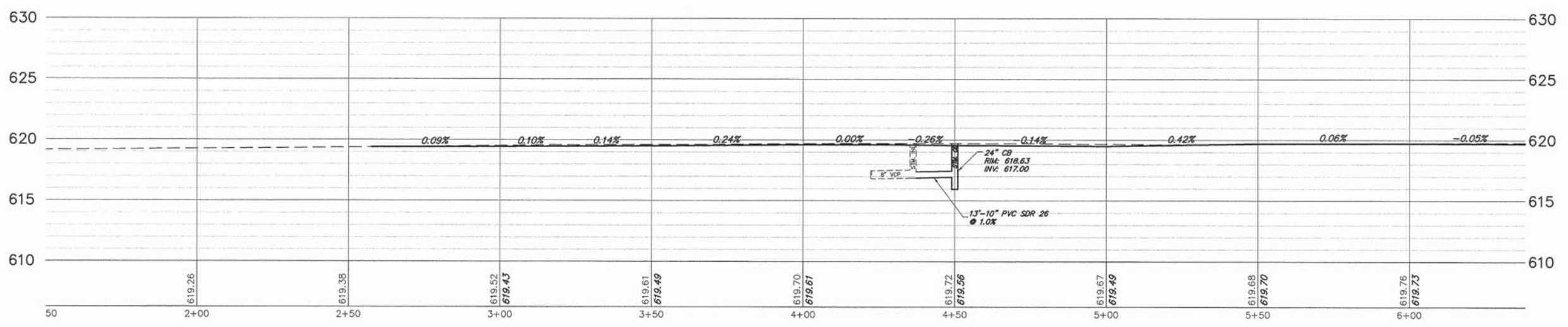
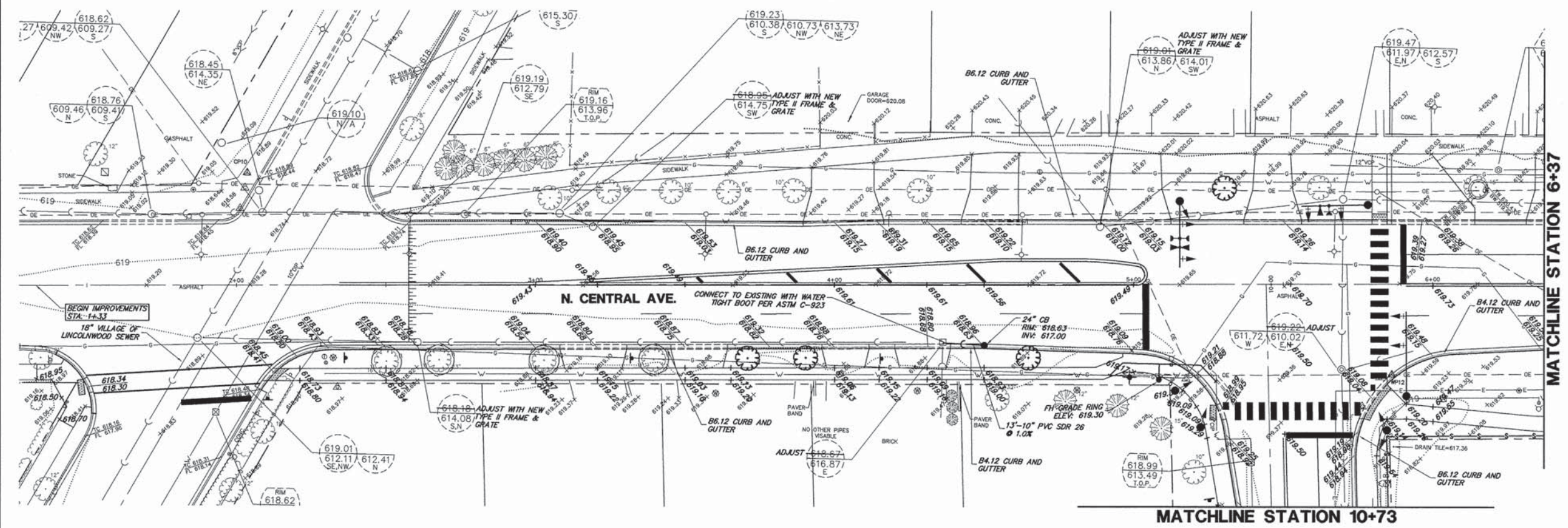
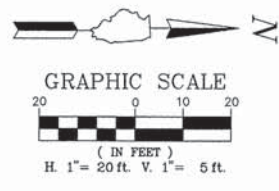
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DRAWN - ZCW
CHECKED - SDB
DATE - 1/31/14

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PRATT AVENUE PLAN AND PROFILE
INTERSECTION AND SIGNAL IMPROVEMENTS
SCALE: 1"=20' SHEET NO. 1 OF 1 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	10
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



CHA GEWALT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 Tel: (847) 438-2000
 Fax: (847) 438-2000

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=20'
 PLOT DATE = 1/31/14

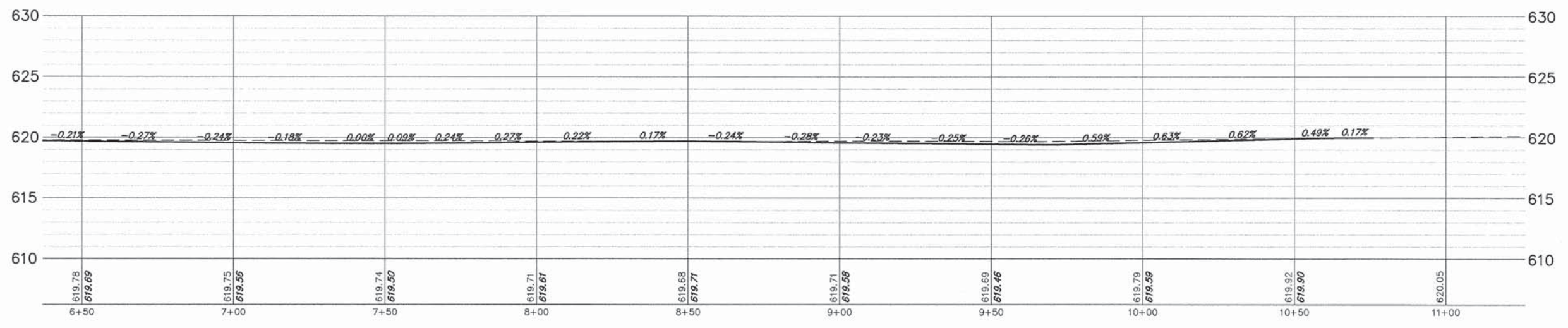
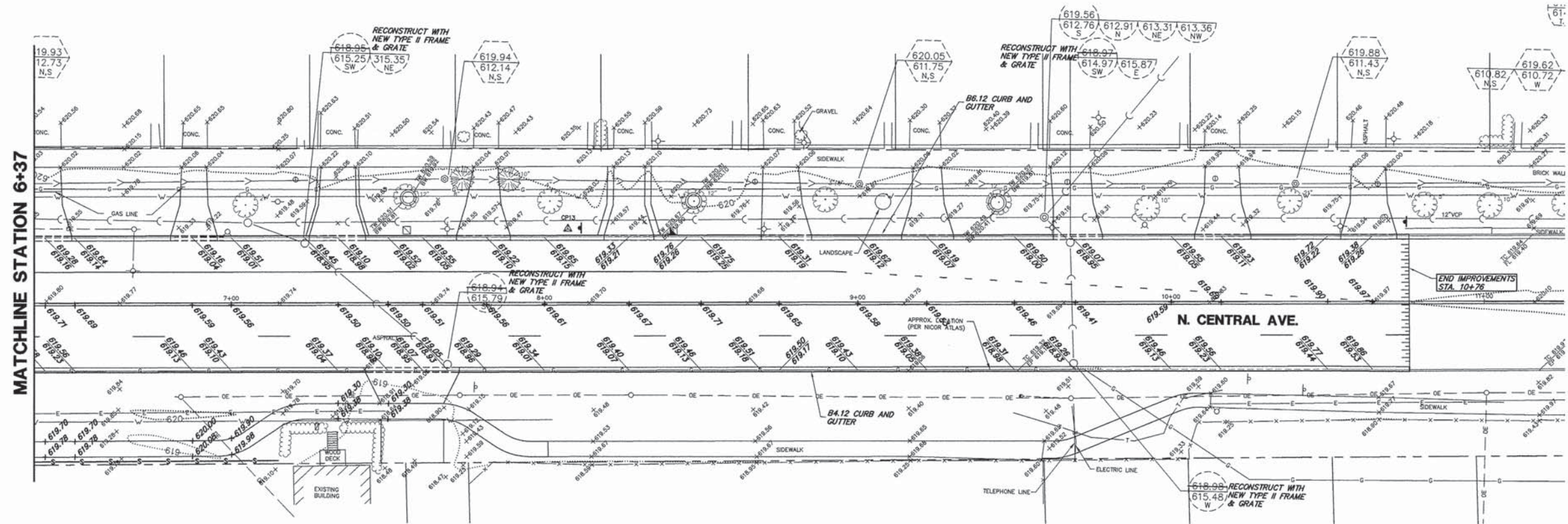
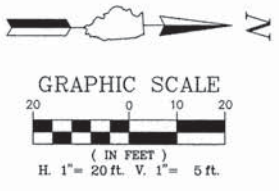
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 CHECKED - SDB
 DATE - 1/31/14

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE PLAN AND PROFILE
 INTERSECTION AND SIGNAL IMPROVEMENTS**
 SCALE: 1"=20' SHEET NO. 1 OF 2 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	11
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



CH2M HILL
 GEVAULT HAMILTON
 ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 P.O. Box 487, Vernon Hills, IL 60061
 Tel: (847) 487-2000
 Fax: (847) 487-2000

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=20'
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

REVISED - -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE PLAN AND PROFILE
 INTERSECTION AND SIGNAL IMPROVEMENTS**
 SCALE: 1"=20' SHEET NO. 2 OF 2 SHEETS STA. TO STA.

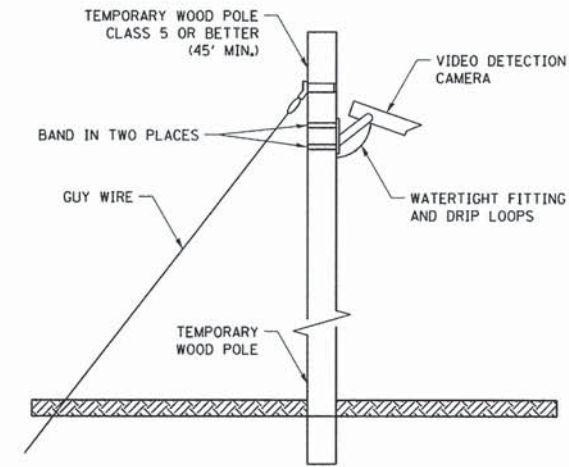
FAU RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	12
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				

NOTES FOR TEMPORARY TRAFFIC SIGNALS:

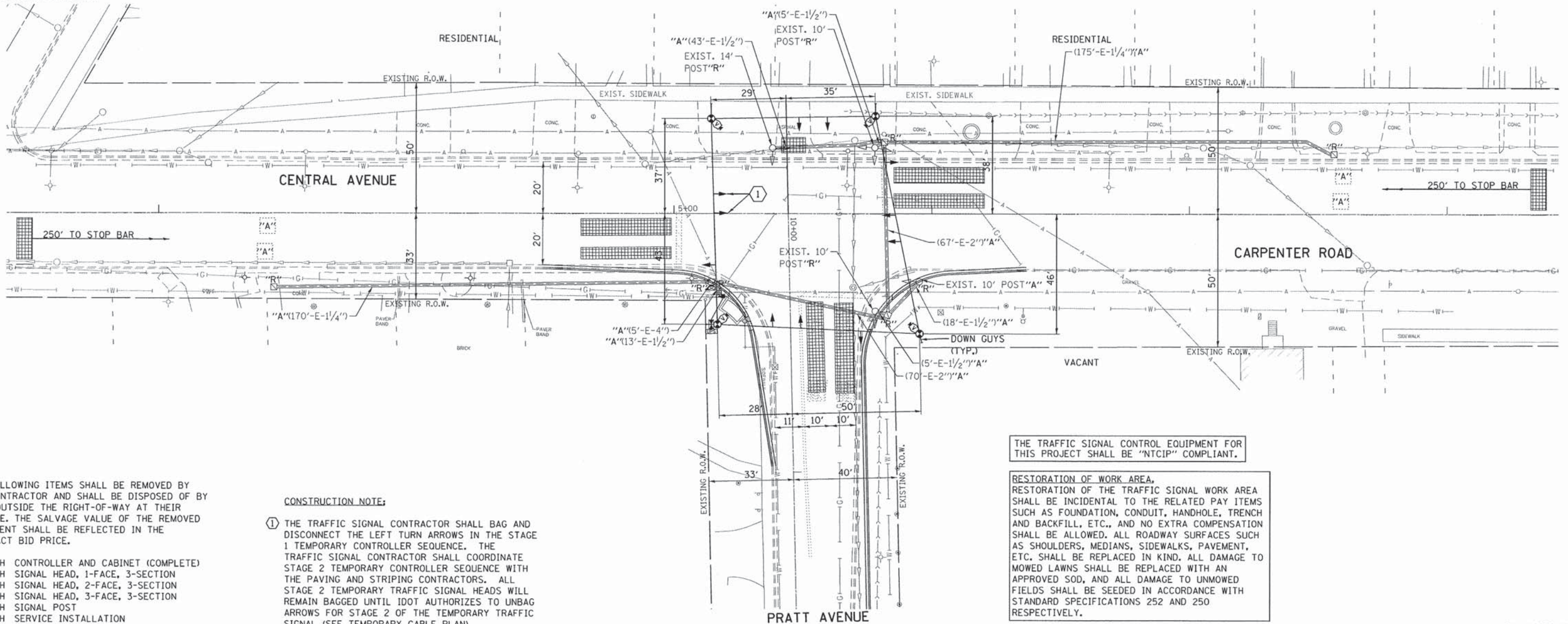
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. 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 SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROLLER EQUIPMENT.

NOTES FOR TEMPORARY TRAFFIC SIGNALS CONTINUED:

6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF THE DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)



THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

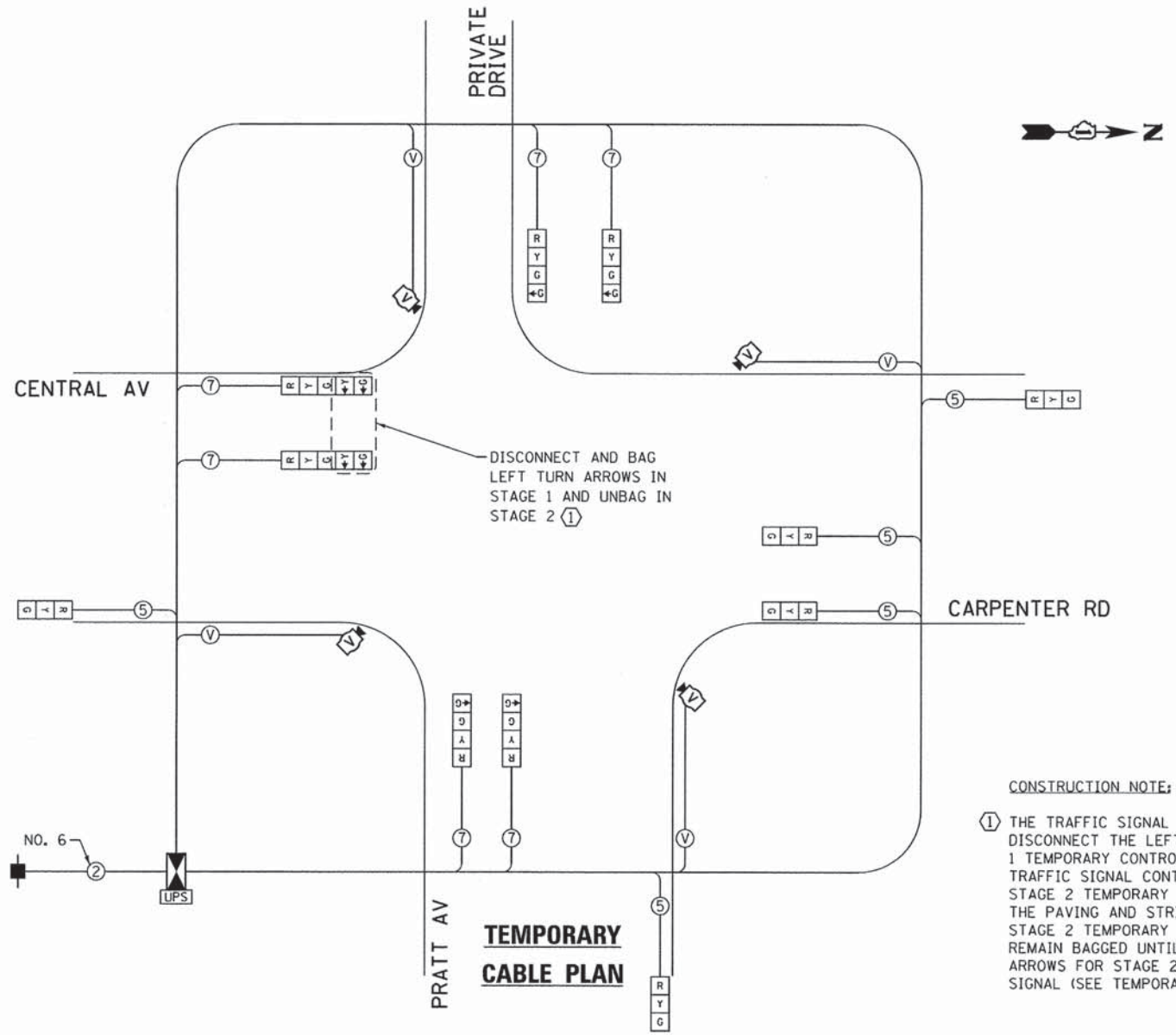
- 1 EACH CONTROLLER AND CABINET (COMPLETE)
- 3 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 1 EACH SIGNAL HEAD, 2-FACE, 3-SECTION
- 1 EACH SIGNAL HEAD, 3-FACE, 3-SECTION
- 4 EACH SIGNAL POST
- 1 EACH SERVICE INSTALLATION

CONSTRUCTION NOTE:

- 1 THE TRAFFIC SIGNAL CONTRACTOR SHALL BAG AND DISCONNECT THE LEFT TURN ARROWS IN THE STAGE 1 TEMPORARY CONTROLLER SEQUENCE. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE STAGE 2 TEMPORARY CONTROLLER SEQUENCE WITH THE PAVING AND STRIPING CONTRACTORS. ALL STAGE 2 TEMPORARY TRAFFIC SIGNAL HEADS WILL REMAIN BAGGED UNTIL IDOT AUTHORIZES TO UNBAG ARROWS FOR STAGE 2 OF THE TEMPORARY TRAFFIC SIGNAL (SEE TEMPORARY CABLE PLAN).

850 Forest Edge Drive
 Vernon Hills, IL 60061
 GEWALT HAMILTON
 ASSOCIATES, INC. FAX: (815) 488-9200

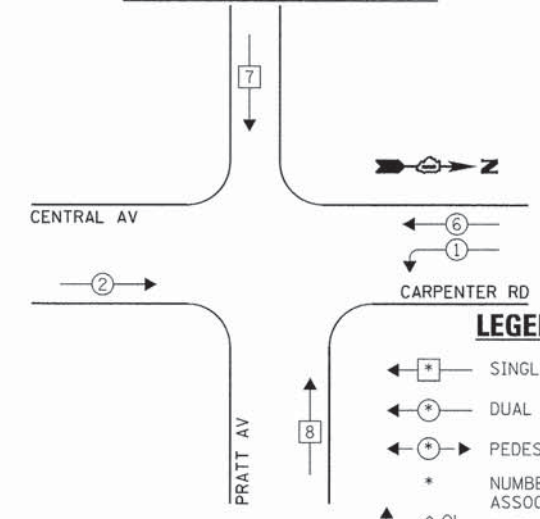
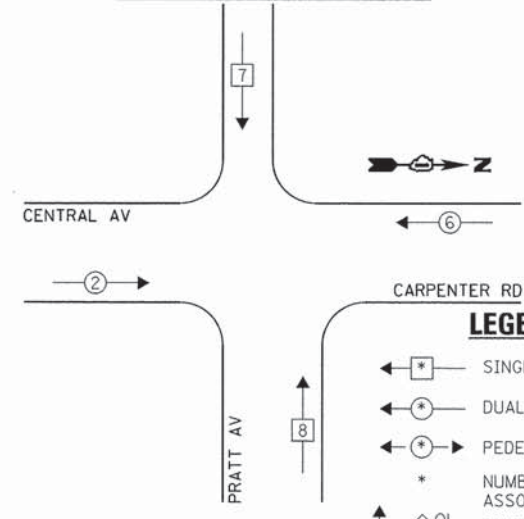
FILE NAME = D161A27-013-ts.dgn	USER NAME = Zwallsten	DESIGNED - JRD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT - CENTRAL AVENUE /CARPENTER ROAD AT PRATT AVENUE	F.A.U. RTE. 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 13		
PLOT SCALE = 1:20	PLOT DATE = 2/18/2014	CHECKED - DPB	REVISED -			SCALE: 1"=20'	SHEET OF SHEETS STA. TO STA.	CONTRACT NO. 61A27				
		DATE -	REVISED -			GHA #9232.407						
						ILLINOIS FED. AID PROJECT						



CONSTRUCTION NOTE:
 (1) THE TRAFFIC SIGNAL CONTRACTOR SHALL BAG AND DISCONNECT THE LEFT TURN ARROWS IN THE STAGE 1 TEMPORARY CONTROLLER SEQUENCE. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE STAGE 2 TEMPORARY CONTROLLER SEQUENCE WITH THE PAVING AND STRIPING CONTRACTORS. ALL STAGE 2 TEMPORARY TRAFFIC SIGNAL HEADS WILL REMAIN BAGGED UNTIL IDOT AUTHORIZES TO UNBAG ARROWS FOR STAGE 2 OF THE TEMPORARY TRAFFIC SIGNAL (SEE TEMPORARY CABLE PLAN).

STAGE 1 - TEMPORARY CONTROLLER SEQUENCE

STAGE 2 - TEMPORARY CONTROLLER SEQUENCE (1)



LEGEND:
 ← * → SINGLE ENTRY PHASE
 ← * → DUAL ENTRY PHASE
 ← * → PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE
 ← * → OL OVERLAP

LEGEND:
 ← * → SINGLE ENTRY PHASE
 ← * → DUAL ENTRY PHASE
 ← * → PEDESTRIAN PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE
 ← * → OL OVERLAP

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE L.E.D.	OPERATION	
SIGNAL (RED)	11	135	17	0.50	93.5
SIGNAL (YELLOW)	11	135	25	0.25	68.75
SIGNAL (GREEN)	15	135	15	0.25	56.25
ARROW	4	135	12	0.10	4.8
PED. SIGNAL	-	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	1	-	150	1.00	150.0
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					498.3

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
 (ADDRESS) 201 W. CENTER COURT
 (ADDRESS) SCHALMBURG, IL 60196-1096
 ENERGY SUPPLY - CONTACT: MS. TERRI BLECK
 PHONE: (847) 816-5239
 COMPANY: COM-ED, LIBERTYVILLE

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

STAGE 1 TEMPORARY PHASE DESIGNATION DIAGRAM

STAGE 2 TEMPORARY PHASE DESIGNATION DIAGRAM (1)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

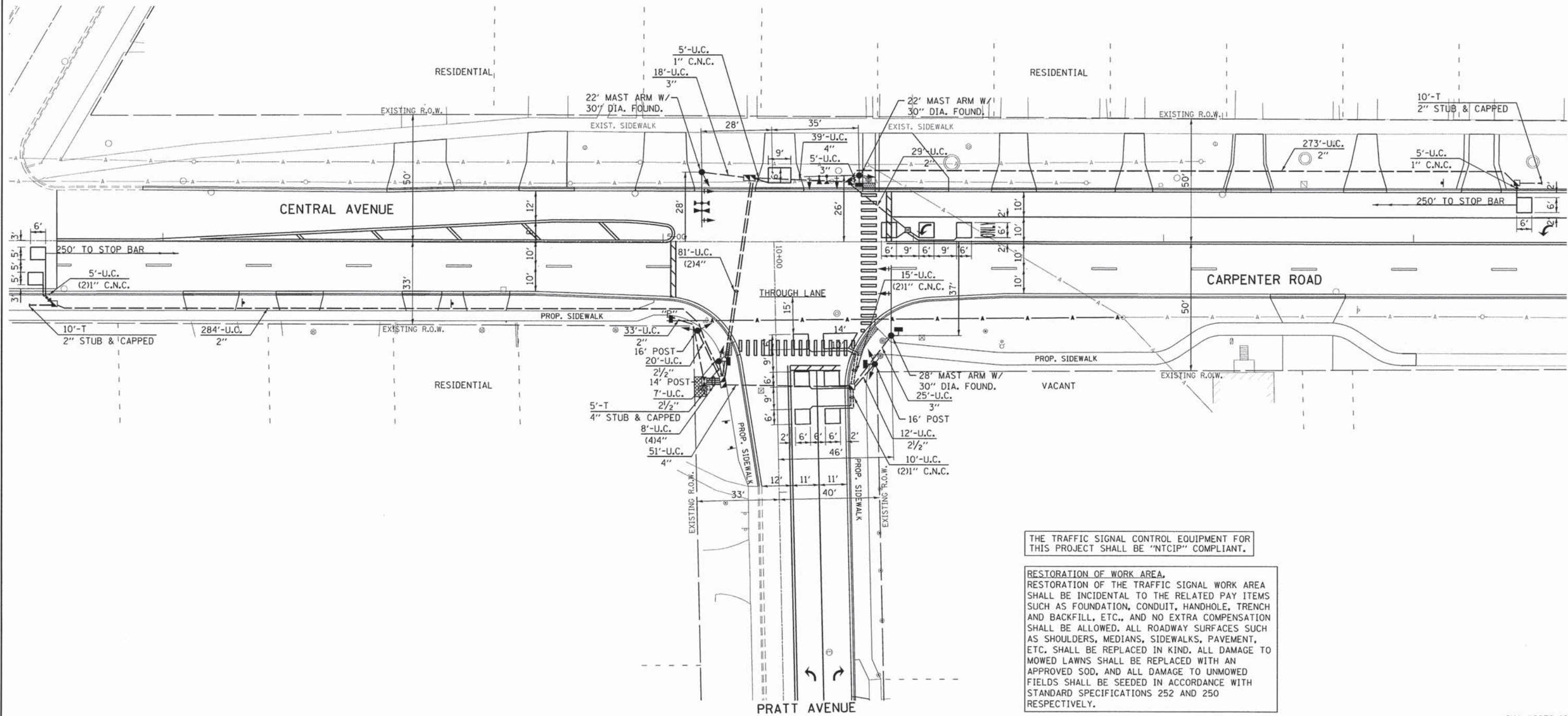
TEMPORARY CABLE PLAN & TEMPORARY PHASE DESIGNATION DIAGRAM
CENTRAL AVENUE / CARPENTER ROAD AT PRATT AVENUE

FILE NAME = 0161A27-014-ts.dgn	USER NAME = Zwallsten	DESIGNED - JRD	REVISED -
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	PLOT DATE = 2/18/2014	CHECKED - DPB	REVISED -
		DATE -	REVISED -

F.A.U. RTE. 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 14
				CONTRACT NO. 61A27
GHA #9232.407				

SCALE: SHEET OF SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

RESTORATION OF WORK AREA,
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

GEWALT HAMILTON ASSOCIATES, INC. 850 Forest Edge Drive, Vernon Hills, IL 60061
 P.O. Box 887, Vernon Hills, IL 60061
 TEL: (847) 438-7000 FAX: (847) 438-7001

FILE NAME = D161A27-015-ts.dgn	USER NAME = ZWallsten	DESIGNED - JRD	REVISED -
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	PLOT DATE = 2/18/2014	CHECKED - DPB	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN - CENTRAL AVENUE / CARPENTER ROAD AT PRATT AVENUE
 SCALE: 1"=20' SHEET OF SHEETS STA. TO STA.

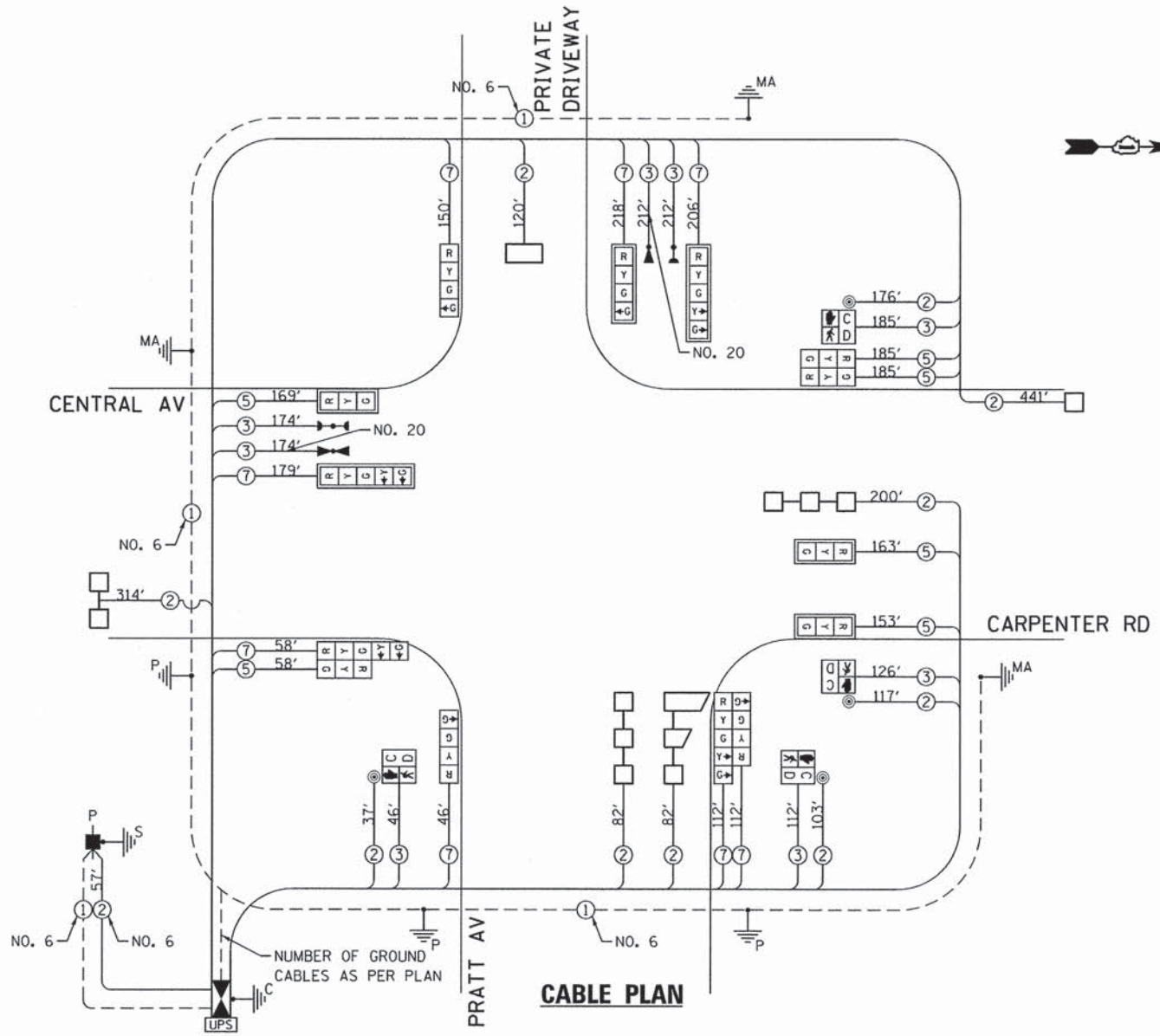
F.A.U. RTE. 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 15
CONTRACT NO. 61A27				ILLINOIS FED. AID PROJECT

GHA #9232.407

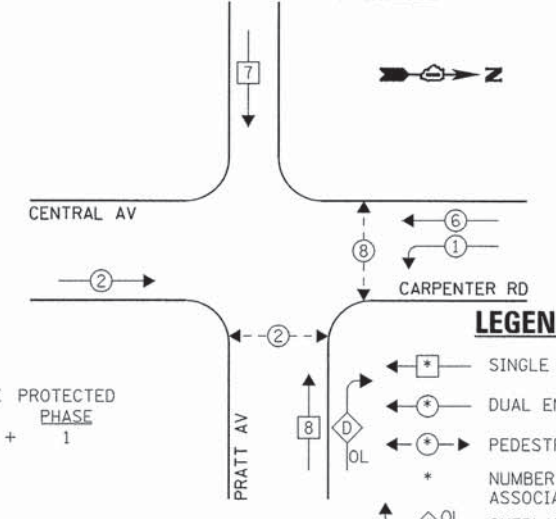
SCHEDULE OF QUANTITIES
CENTRAL AVENUE / CARPENTER ROAD AT PRATT AVENUE

NO.	QUANT.	UNIT	DESCRIPTION
1.	13.50	SO FT	SIGN PANEL - TYPE 1
2.	24.00	SO FT	SIGN PANEL - TYPE 2
3.	1	EACH	SERVICE INSTALLATION - POLE MOUNTED
4.	641	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
5.	19	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.
6.	49	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
7.	281	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
8.	4	EACH	HANDHOLE
9.	1	EACH	HEAVY-DUTY HANDHOLE
10.	2	EACH	DOUBLE HANDHOLE
*11.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
12.	433	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
13.	855	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
14.	913	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
15.	1,081	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
16.	1,356	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
17.	57	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
18.	387	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
19.	1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
20.	2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
21.	2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.
22.	1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.
23.	12	FOOT	CONCRETE FOUNDATION, TYPE A
24.	4	FOOT	CONCRETE FOUNDATION, TYPE C
25.	30	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
26.	3	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
27.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
28.	1	EACH	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED
29.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
30.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
31.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
32.	1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-4 SECTION, 1-5 SECTION, BRACKET MOUNTED
33.	4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
34.	6	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
35.	6	EACH	INDUCTIVE LOOP DETECTOR
36.	2	EACH	LIGHT DETECTOR
37.	1	EACH	LIGHT DETECTOR AMPLIFIER
38.	4	EACH	PEDESTRIAN PUSH-BUTTON
39.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
40.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
41.	5	EACH	REMOVE EXISTING HANDHOLE
42.	5	EACH	REMOVE EXISTING CONCRETE FOUNDATION
43.	386	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
44.	1	EACH	UNINTERRUPTABLE POWER SUPPLY, SPECIAL
45.	77.10	SO FT	TEMPORARY INFORMATION SIGNING
46.	1	EACH	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2
47.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

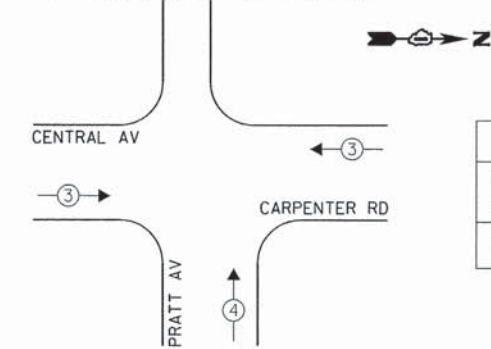
*SUPER P CABINET



PROPOSED CONTROLLER SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED PHASE DESIGNATION DIAGRAM

OVERLAP LETTER D = PERMISSIVE PHASE 8 + PROTECTED PHASE 1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	INCAND.	L.E.D.	OPERATION	
SIGNAL (RED)	14	135	17	0.50	119.0
SIGNAL (YELLOW)	14	135	25	0.25	87.5
SIGNAL (GREEN)	18	135	15	0.25	67.5
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	-	100	1.00	100.0
LUMINAIRE	-	-	250	0.50	-
L.E.D. ST. NAME SIGN	-	-	64	0.50	-
VIDEO SYSTEM	-	-	150	1.00	-
BATTERY BACKUP	1	-	25	1.00	25.0
ILLUMINATED SIGN	-	-	25	0.05	-
TOTAL =					508.6

ENERGY COSTS - BILLED TO: IL DEPT. OF TRANSPORTATION
(ADDRESS) 201 W. CENTER COURT
(ADDRESS) SCHALMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT: MS. TERRI BLECK
PHONE: (847) 816-5239
COMPANY: COM-ED LIBERTYVILLE

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

850 Forest Edge Drive
Vernon Hills, IL 60061
GHA ASSOCIATES, INC. P.O. Box 118900

FILE NAME = D:\61A27-016-ts.dgn	USER NAME = ZWallston	DESIGNED - JRD	REVISED -
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		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
DIAGRAM, & EMERGENCY VEHICLE PREEMPTION SEQUENCE**
CENTRAL AVENUE / CARPENTER ROAD AT PRATT AVENUE

F.A.U. RTE. 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 16
CONTRACT NO. 61A27				GH A #9232.407
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTABLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				QUEUE DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PREFORMED QUEUE DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				"RB" INDICATES REFLECTIVE BACKPLATE				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ILLUMINATED SIGN "NO LEFT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO INTERCONNECT							
DETECTOR LOOP, TYPE I				RADIO REPEATER							
PREFORMED DETECTOR LOOP				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
MICROWAVE VEHICLE SENSOR				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

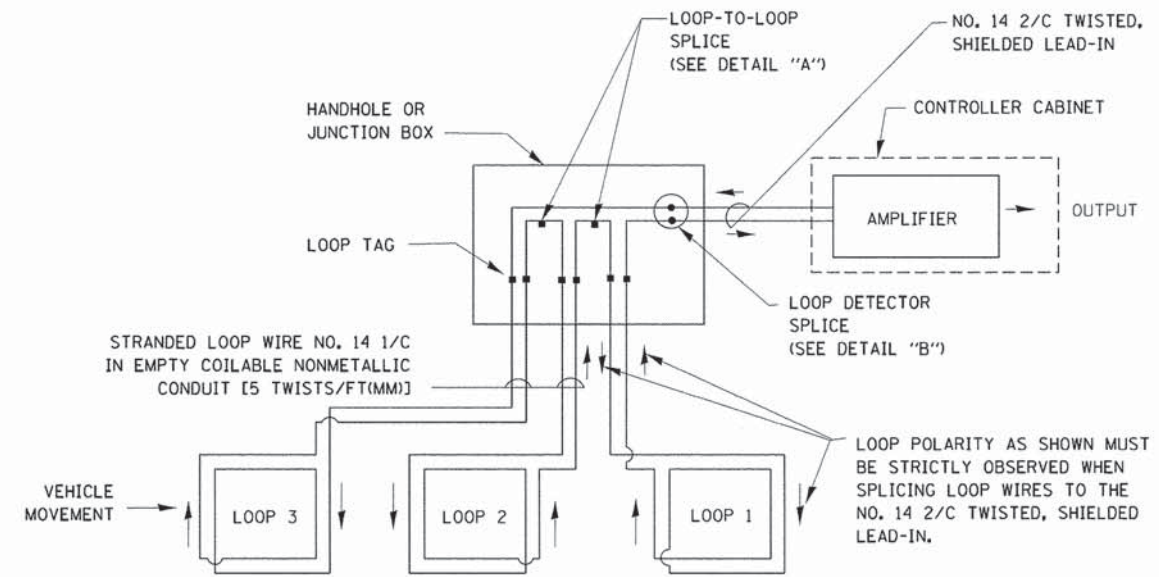
RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

CHA GEVAULT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 P: (847) 489-7000
 F: (847) 489-7001

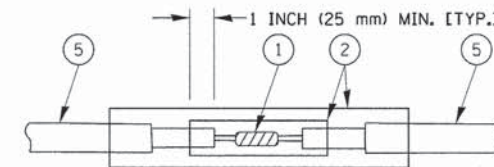
LOOP DETECTOR NOTES

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVESHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

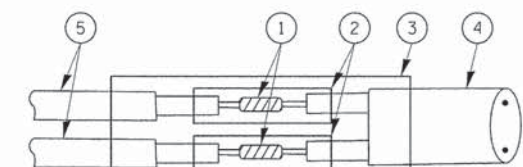


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.

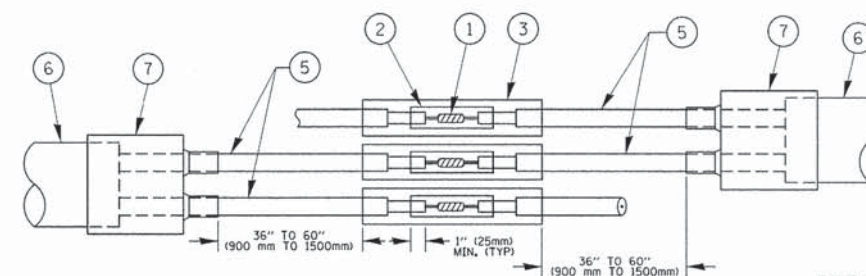


DETAIL "A"
LOOP-TO-LOOP SPLICE

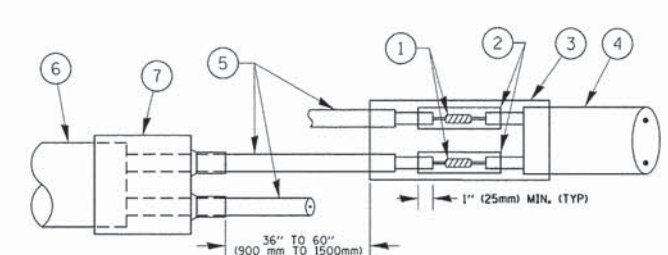


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



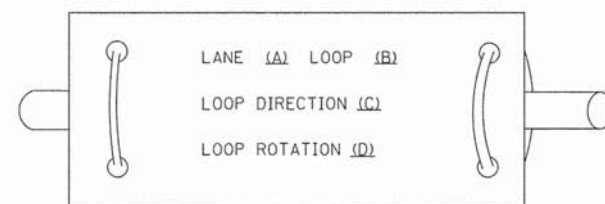
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PRE-FORMED LOOP

LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- NO. 14 2/C TWISTED, SHIELDED CABLE.
- LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- PRE-FORMED LOOP
- XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

LOOP LEAD-IN CABLE TAG



- LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

850 Forest Edge Drive
 Vernon Hills, IL 60061
 TEL: (847) 459-7700
 FAX: (847) 459-7700
GEWALT HAMILTON ASSOCIATES, INC.

FILE NAME = D161A27-018-details.dgn
 Default

USER NAME = ZWallsten
 PLOT SCALE = 1:28
 PLOT DATE = 2/18/2014

DESIGNED - DAD
 DRAWN - BCK
 CHECKED - DAD
 DATE - 10-28-09

REVISED - DAG 1-1-14
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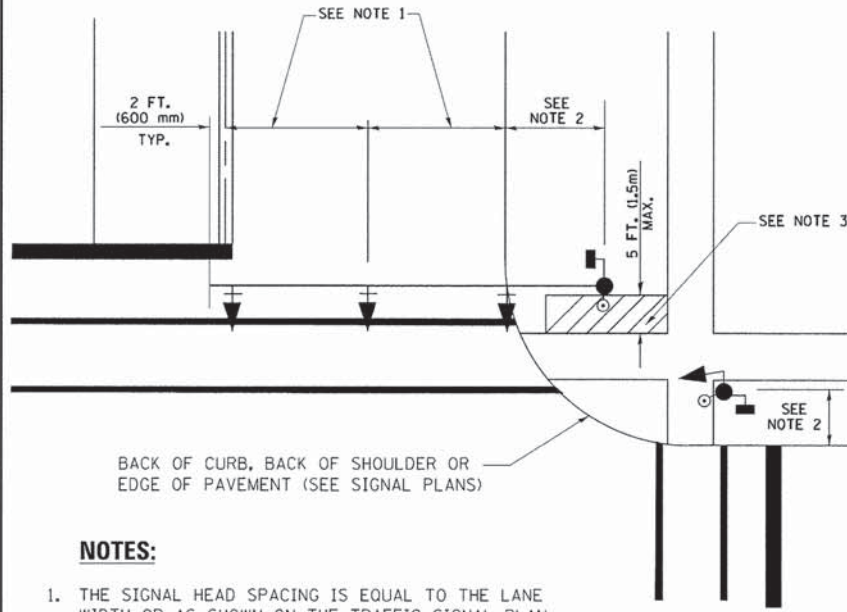
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
 STANDARD TRAFFIC SIGNAL DESIGN DETAILS**
 SCALE: NONE SHEET 2 OF 7 SHEETS STA. TO STA.

F.A.U. RTE. 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 18
TS-05			CONTRACT NO. 61A27	
[ILLINOIS] FED. AID PROJECT				

GHA #9232.407

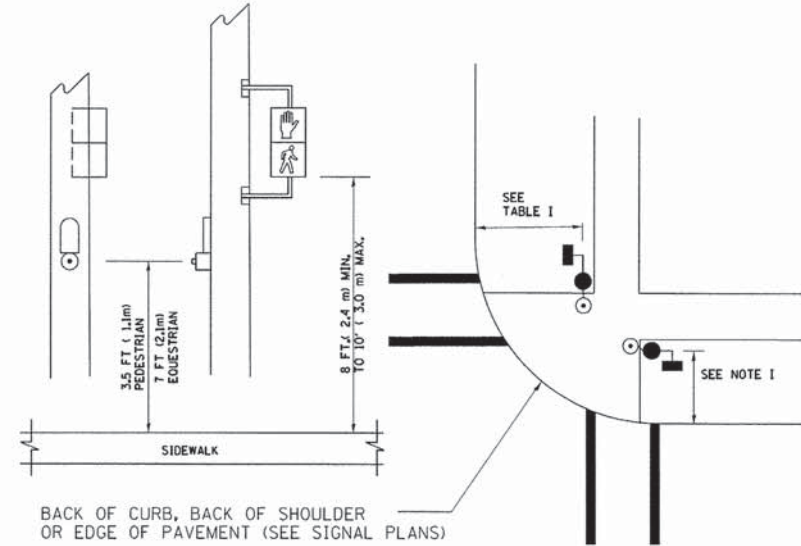
TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

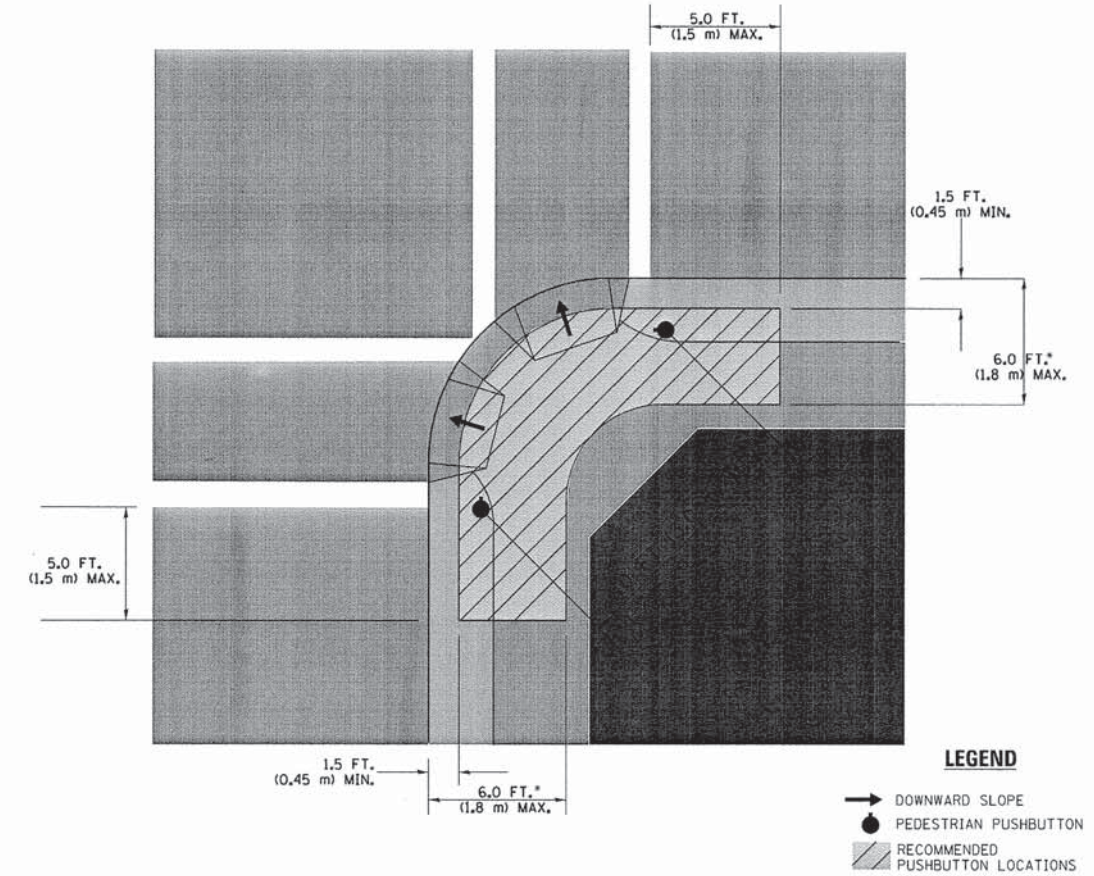
PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- RECOMMENDED PUSHBUTTON LOCATIONS

- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD AFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

GEVAULT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 PH: (847) 433-0000
 FAX: (847) 433-0001

FILE NAME =
 0161A27-019-details.dgn
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USER NAME = Zwallsten
 PLOT SCALE = 1/28
 PLOT DATE = 2/18/2014

DESIGNED - DAD
 DRAWN - BCK
 CHECKED - DAD
 DATE - 10-28-09

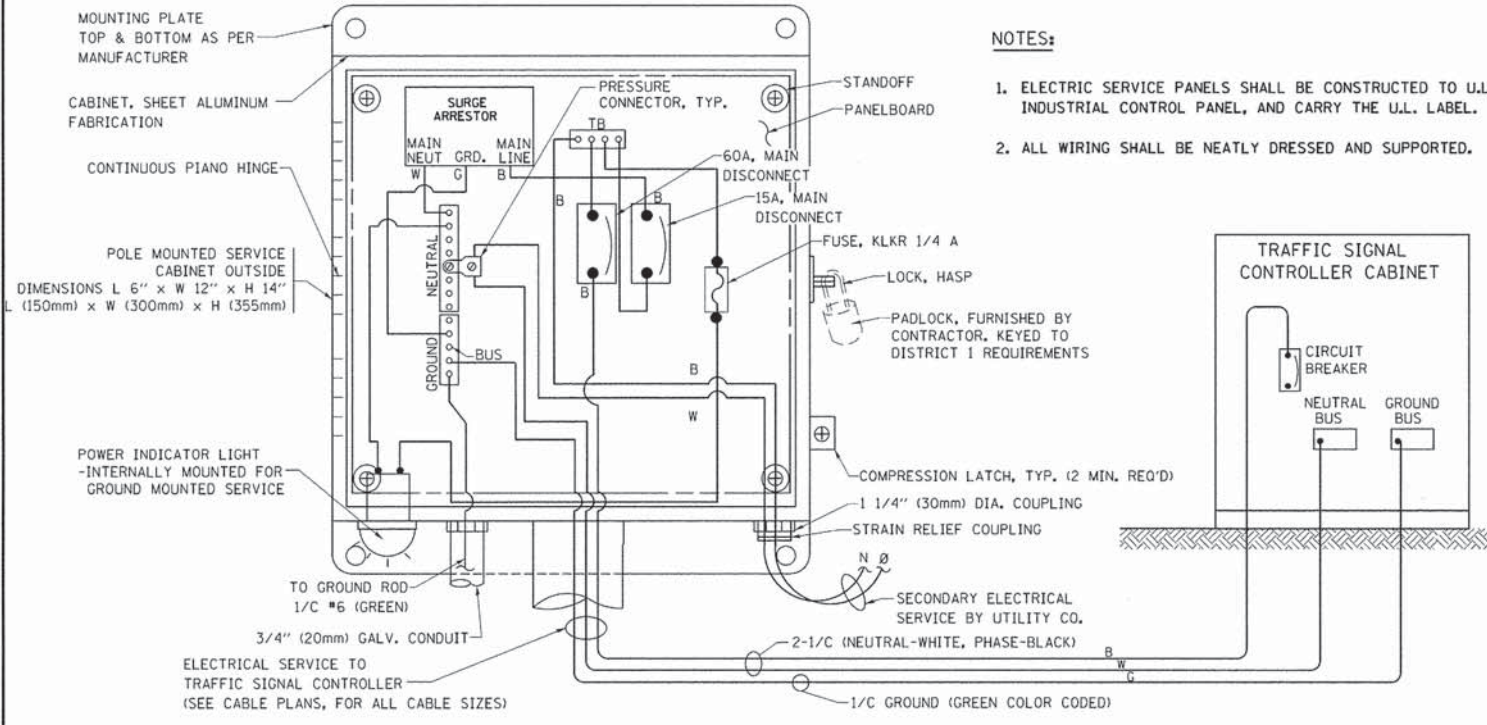
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

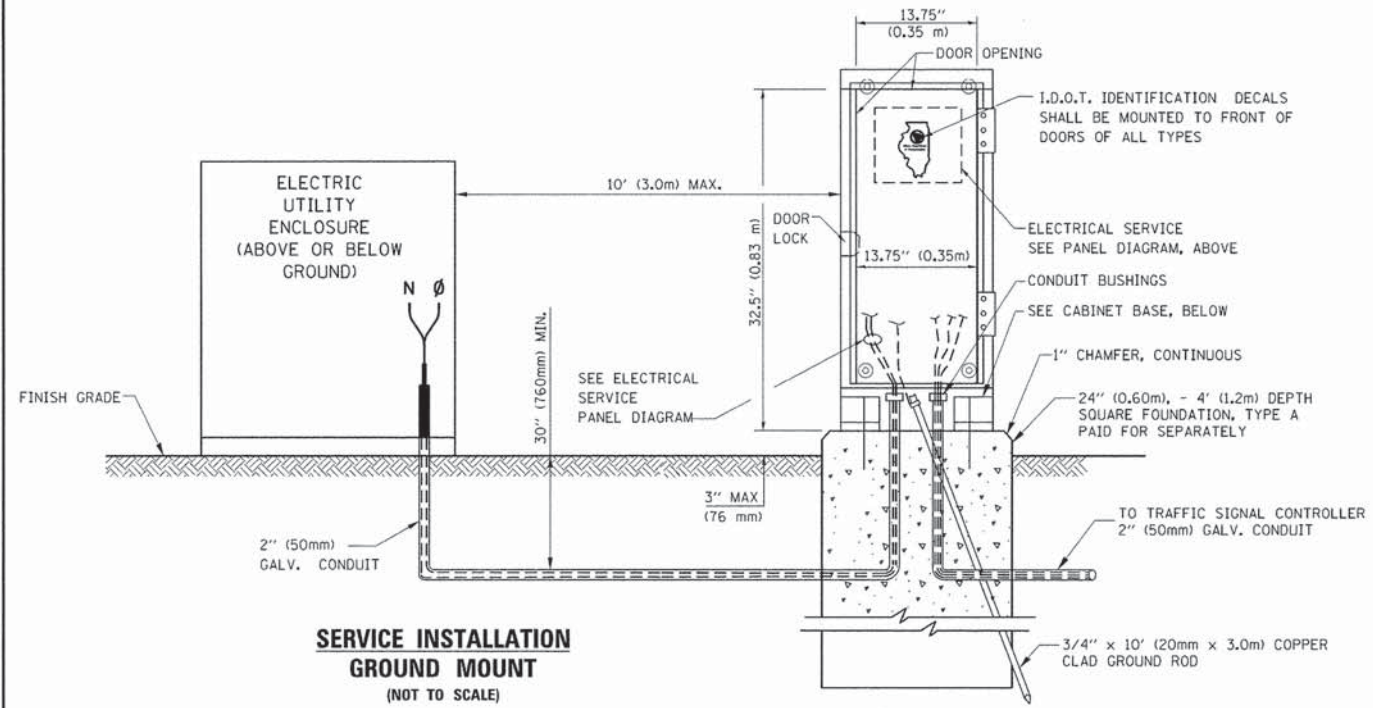
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS
 SCALE: NONE SHEET 3 OF 7 SHEETS STA. TO STA.

F.A.U. RTE. 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 19
TS-05		CONTRACT NO. 61A27		
[ILLINOIS] FED. AID PROJECT				

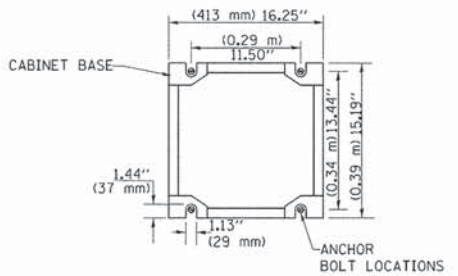
GHA #9232.407



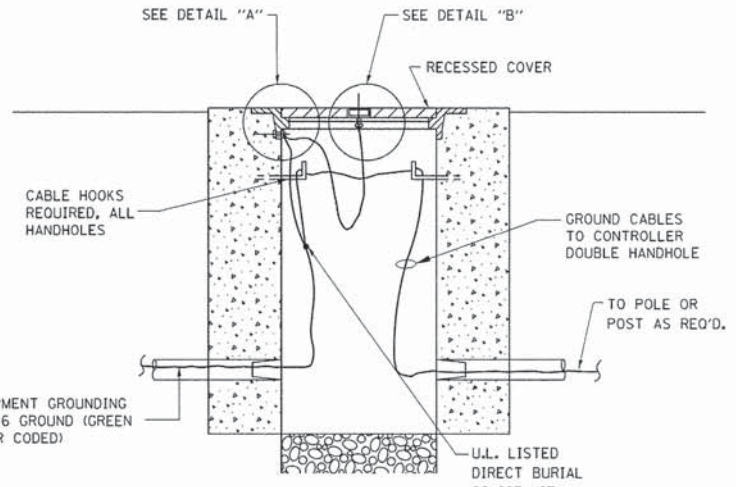
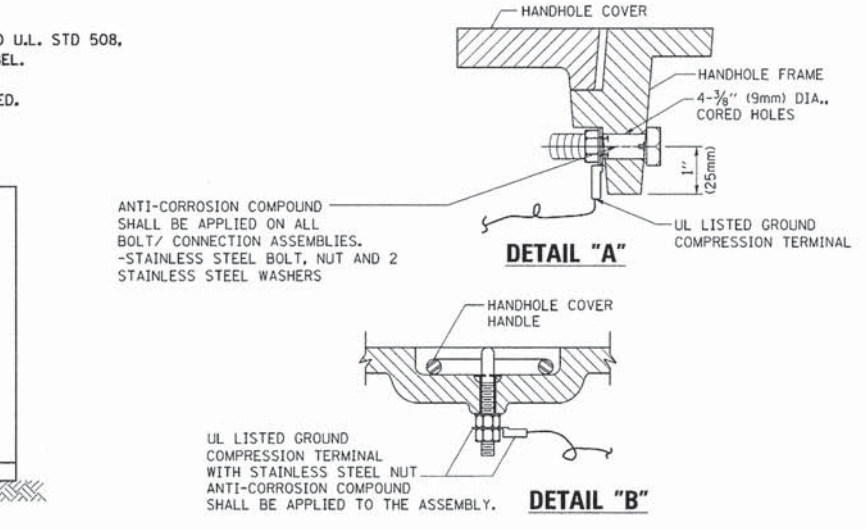
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)



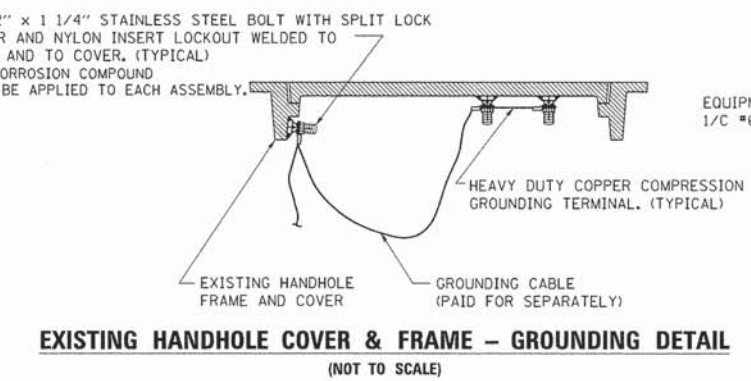
SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)



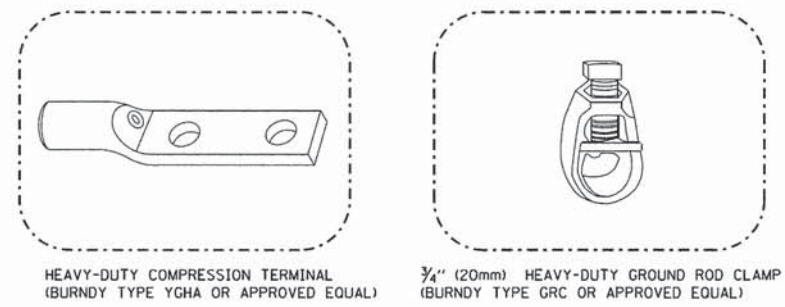
CABINET - BASE BOLT PATTERN (NOT TO SCALE)



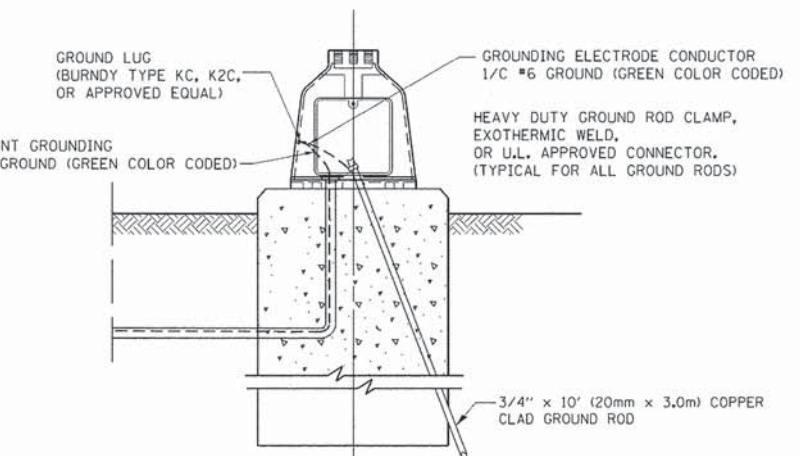
HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)



- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE)

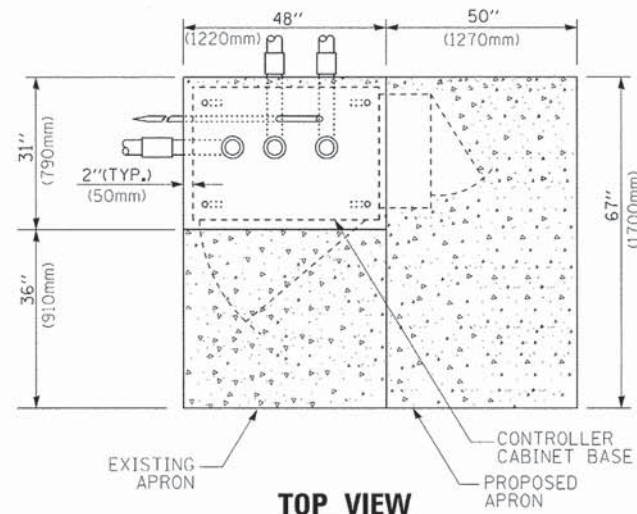
850 Forest Edge Drive, Vernon Hills, IL 60061, GEWALT HAMILTON ASSOCIATES, INC., TEL: 847.438.7300, FAX: 847.438.7301

FILE NAME = D:\61A27-020-details.dgn	USER NAME = ZWallsten	DESIGNED - DAD	REVISED - DAG 1-1-14
	PLOT SCALE = 1:20	DRAWN - BCK	REVISED -
	PLOT DATE = 2/18/2014	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

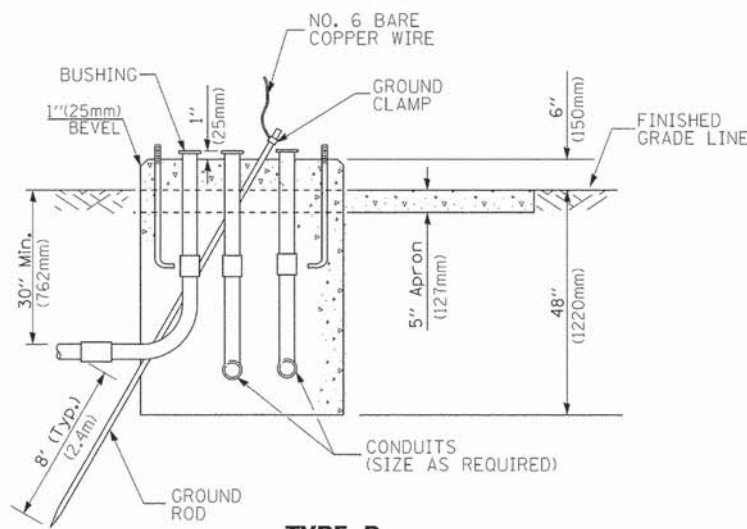
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE		F.A.U. RTE. 2798	SECTION 12-00058-00-TL	COUNTY McHENRY	TOTAL SHEETS 41	SHEET NO. 20
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		TS-05		CONTRACT NO. 61A27		
SCALE: NONE	SHEET 4 OF 7 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			

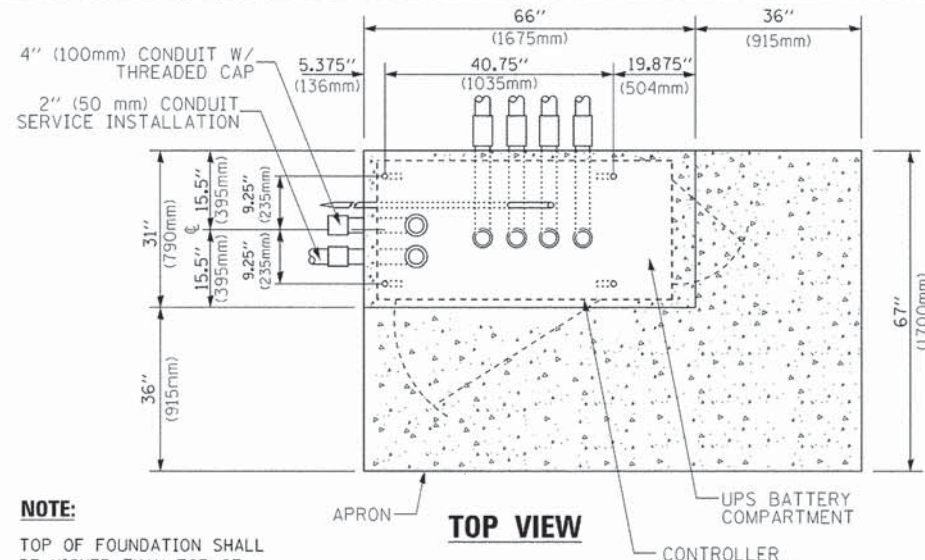
GHA #9232.407



TOP VIEW

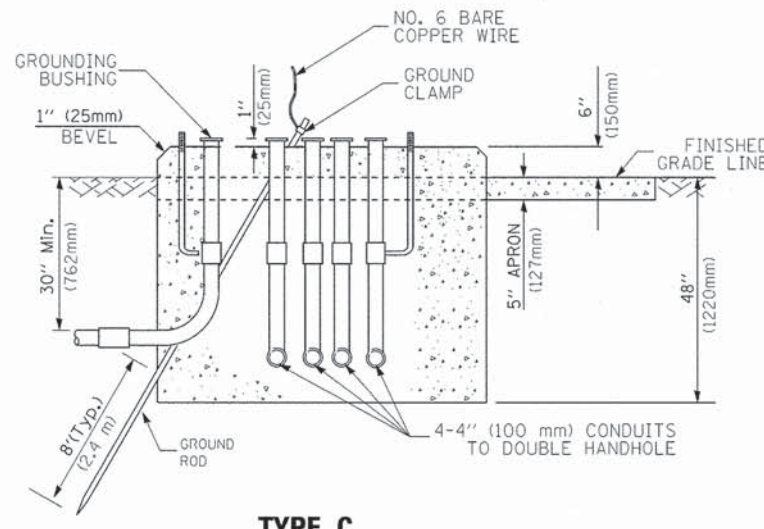


**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**

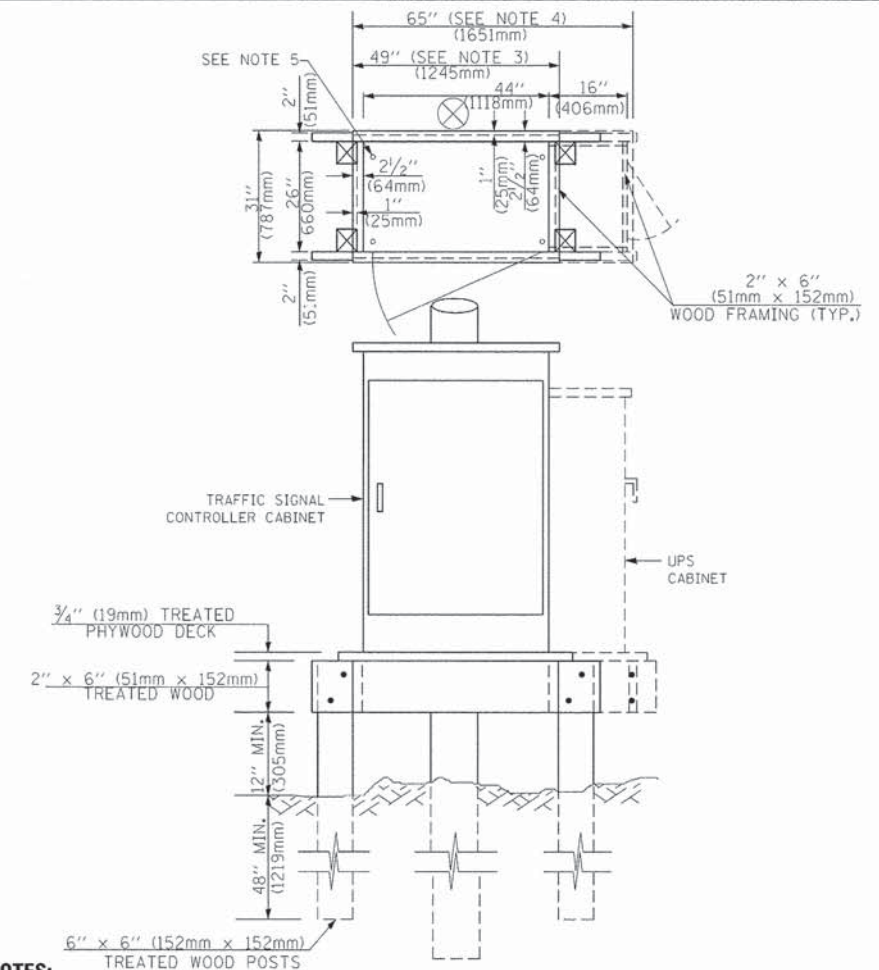


TOP VIEW

NOTE:
TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

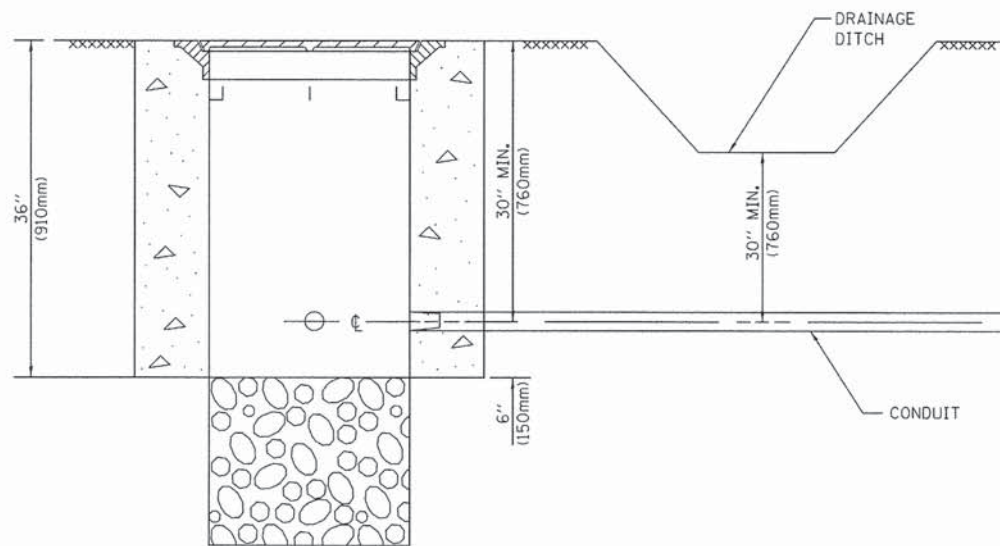
1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & Structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

GHA #9232.407

FILE NAME = D161A27-021-details.dgn	USER NAME = ZWallsten	DESIGNED - DAG	REVISED - DAG 1-1-14
Default	PLOT SCALE = 1:20	DRAWN - BCK	REVISED -
	PLOT DATE = 2/18/2014	CHECKED - DAD	REVISED -
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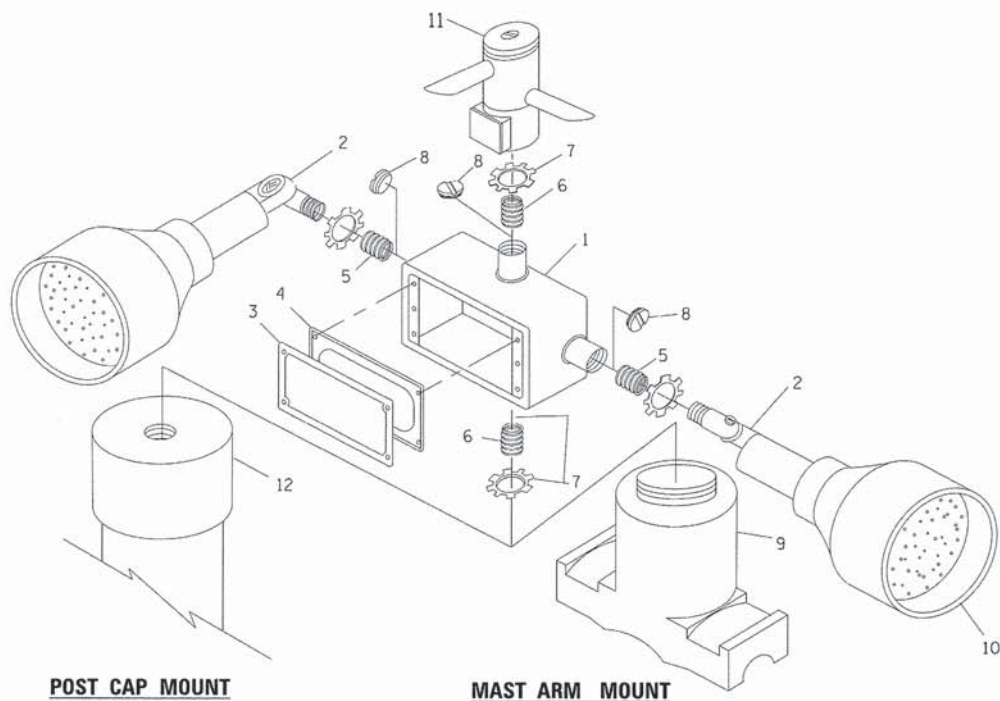
F.A.J. RTE. 2798	SECTION 12-00058-00-TL	COUNTY COOK	TOTAL SHEETS 41	SHEET NO. 21
TS-05			CONTRACT NO. 61A27	
ILLINOIS FED. AID PROJECT				



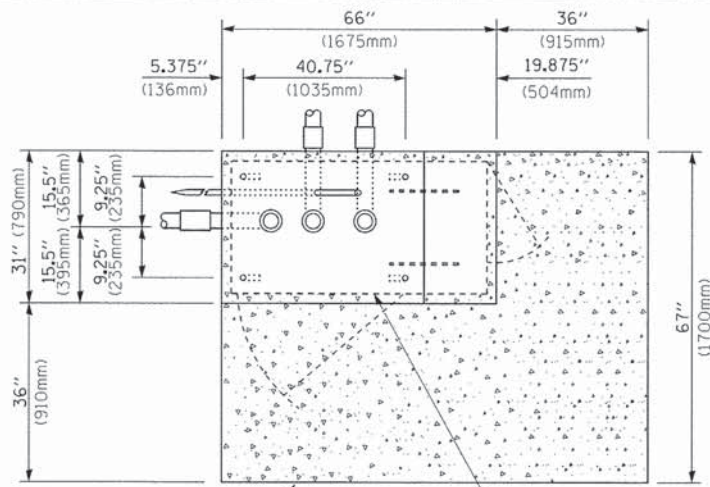
NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

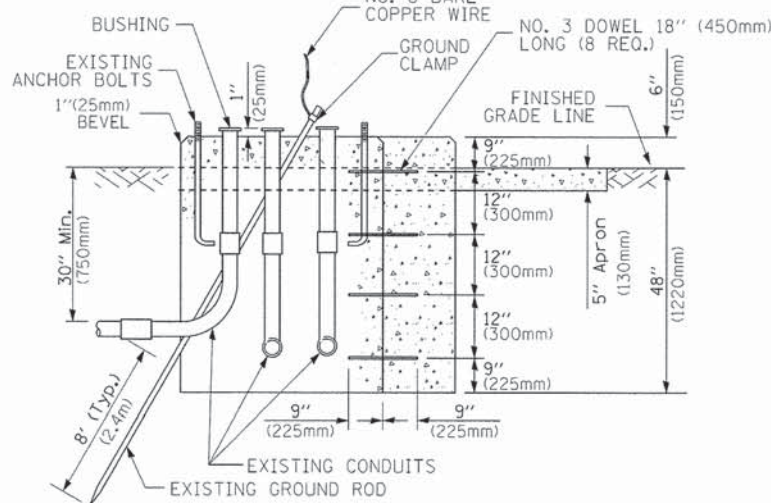
HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



TOP VIEW
(NOT TO SCALE)

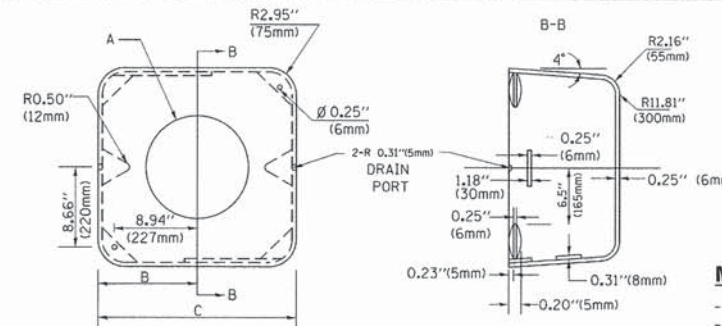


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0,000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4" (19 mm) CLOSE NIPPLE
7	3/4" (19 mm) LOCKNUT
8	3/4" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



MATERIAL:
- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5" (241mm)	19" (483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIABLES	10.75" (273mm)	21.5" (546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIABLES	13.0" (330mm)	26" (660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIABLES	18.5" (470mm)	37" (940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

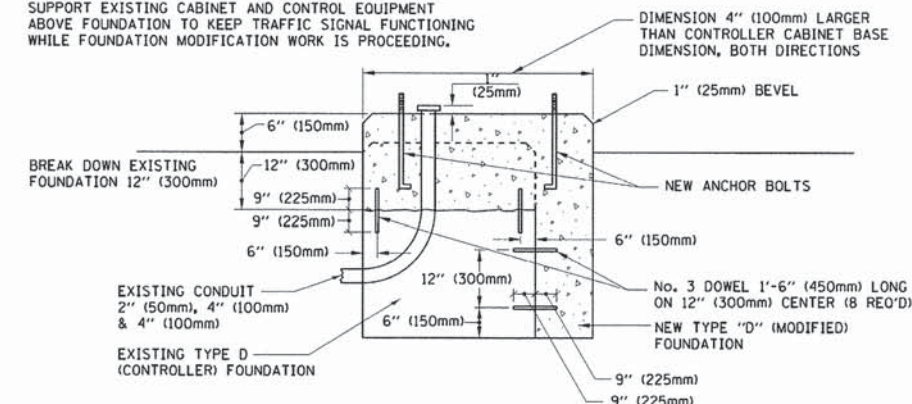
SHROUD

NOTES:

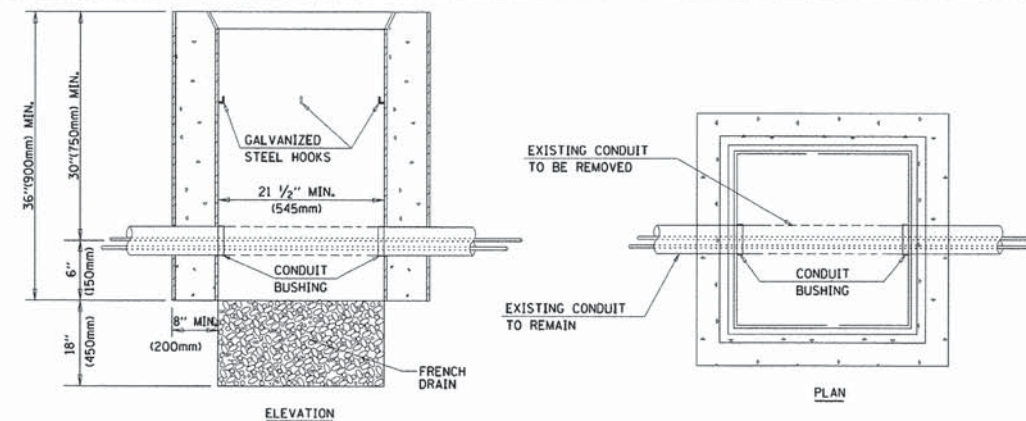
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

850 Forest Edge Drive
Vernon Hills, IL 60061
GHA ASSOCIATES, INC. P.O. BOX 148820
CHICAGO, IL 60614-8820

FILE NAME =
D161A27-022-details.dgn

USER NAME = ZWallsten
PLOT SCALE = 1:20
PLOT DATE = 2/18/2014

DESIGNED - DAD
DRAWN - BCK
CHECKED - DAD
DATE - 10-28-09

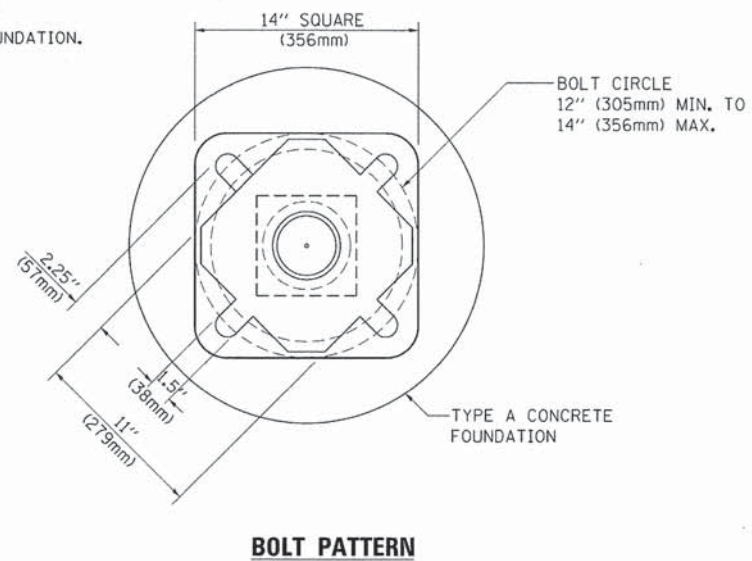
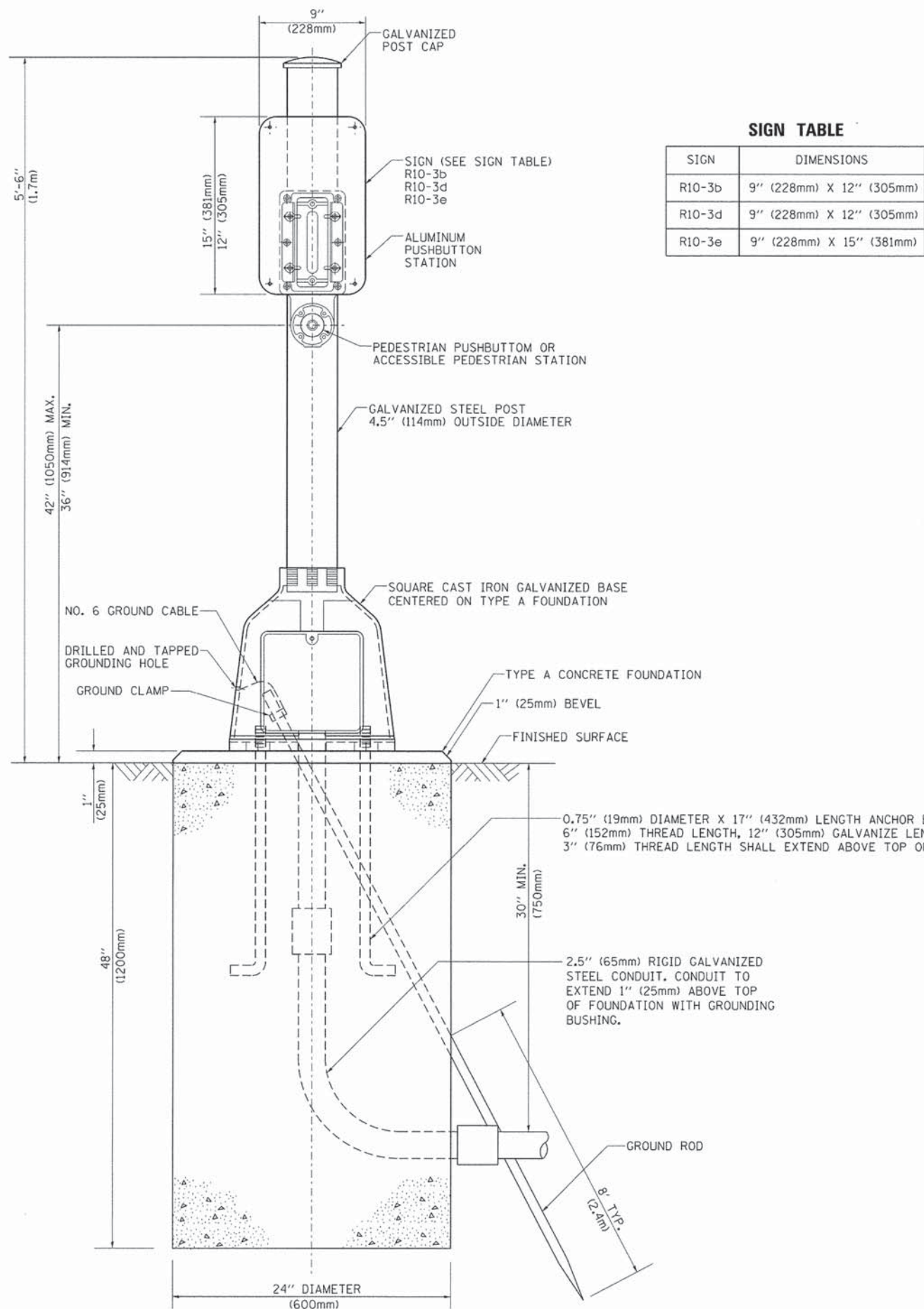
REVISED - DAG 1-1-14
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS
SCALE: NONE SHEET 6 OF 7 SHEETS STA. TO STA.

F.A.U. RTE. 2798 SECTION 12-00058-00-TL COUNTY McHENRY TOTAL SHEETS 41 SHEET NO. 22 CONTRACT NO. 61A27 ILLINOIS FED. AID PROJECT

GHA #9232.407



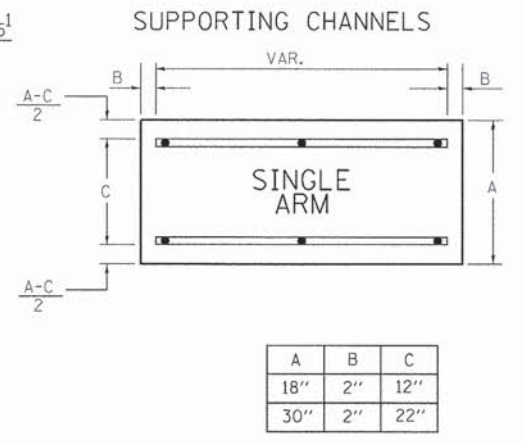
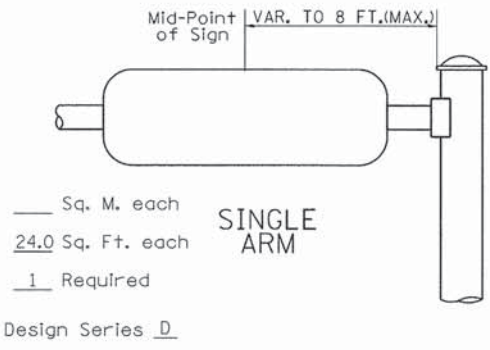
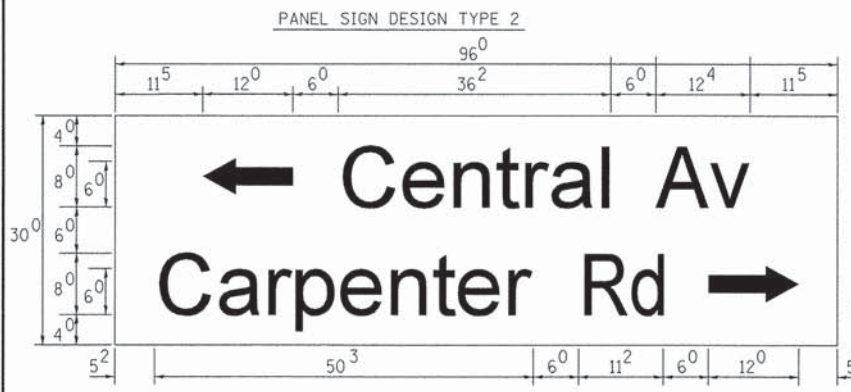
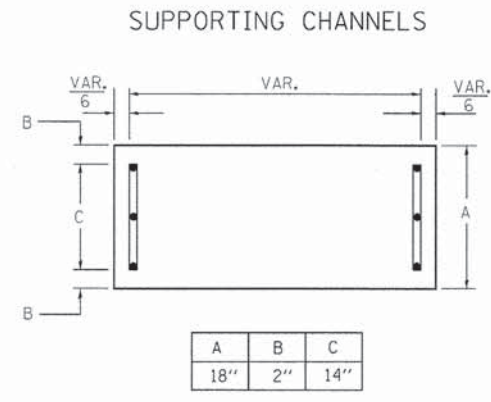
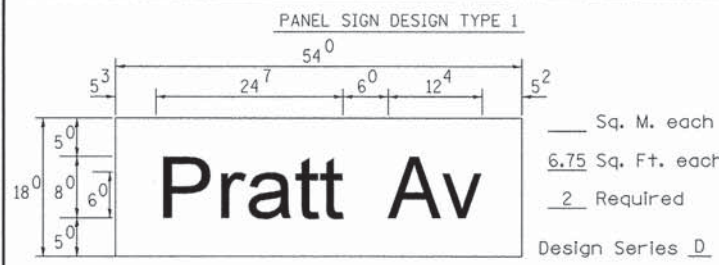
PEDESTRIAN PUSH BUTTON POST, TYPE A

FILE NAME = D161A27-023-details.dgn	USER NAME = ZWallsten	DESIGNED - DAG	REVISED - DAG 1-1-14
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PLOT DATE = 2/18/2014	DATE - 10/1/2012		REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DISTRICT ONE			
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			
SCALE: NONE	SHEET 7	OF 7 SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	23
TS-05			CONTRACT NO. 61A27	
[ILLINOIS] FED. AID PROJECT				



Upper Case To Lower Case
Spacing Chart 8-6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER															
	acde		bhikl		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ²	1 ⁴
B	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁶	1 ⁷
C E G	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
D O Q R	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
F	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²
H I M N	2 ⁰	2 ¹	2 ²	2 ⁴	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹	2 ⁰	2 ¹
J U	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹
K L	1 ¹	1 ²	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
P	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
S	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
T	1 ¹	1 ²	1 ⁶	1 ⁷	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
V	0 ⁶	1 ⁰	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
Y	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁵	0 ⁷	0 ⁵	0 ⁶	0 ⁶	1 ⁰	1 ¹	1 ²
Z	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹

EXAMPLE, 2³ DENOTES 3/8

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS		8 INCH UPPER CASE LETTERS		LETTERS	6 INCH LOWER CASE LETTERS	
	C	D	C	D		C	D
A	3 ⁶	5 ⁰	5 ⁰	6 ⁵	a	3 ⁵	4 ²
B	3 ²	4 ⁰	4 ³	5 ³	b	3 ⁵	4 ²
C	3 ²	4 ⁰	4 ³	5 ³	c	3 ⁵	4 ¹
D	3 ²	4 ⁰	4 ³	5 ³	d	3 ⁵	4 ²
E	3 ⁰	3 ⁵	4 ⁰	4 ⁷	e	3 ⁵	4 ²
F	3 ⁰	3 ⁵	4 ⁰	4 ⁷	f	2 ³	2 ⁶
G	3 ²	4 ⁰	4 ³	5 ³	g	3 ⁵	4 ²
H	3 ²	4 ⁰	4 ³	5 ³	h	3 ⁵	4 ²
I	0 ⁷	0 ⁷	1 ¹	1 ²	i	1 ¹	1 ¹
J	3 ⁰	3 ⁶	4 ⁰	5 ⁰	j	2 ⁰	2 ²
K	3 ²	4 ¹	4 ³	5 ⁴	k	3 ⁵	4 ²
L	3 ⁰	3 ⁵	4 ⁰	4 ⁷	l	1 ¹	1 ¹
M	3 ⁷	4 ⁵	5 ¹	6 ¹	m	6 ⁰	7 ⁰
N	3 ²	4 ⁰	4 ³	5 ³	n	3 ⁵	4 ²
O	3 ⁴	4 ²	4 ⁵	5 ⁵	o	3 ⁶	4 ³
P	3 ²	4 ⁰	4 ³	5 ³	p	3 ⁵	4 ²
Q	3 ⁴	4 ²	4 ⁵	5 ⁵	q	3 ⁵	4 ²
R	3 ²	4 ⁰	4 ³	5 ³	r	2 ⁶	3 ²
S	3 ²	4 ⁰	4 ³	5 ³	s	3 ⁶	4 ²
T	3 ⁰	3 ⁵	4 ⁰	4 ⁷	t	2 ⁷	3 ²
U	3 ²	4 ⁰	4 ³	5 ³	u	3 ⁵	4 ²
V	3 ⁵	4 ⁴	4 ⁷	6 ⁰	v	4 ²	4 ⁷
W	4 ⁴	5 ²	6 ⁰	7 ⁰	w	5 ⁵	6 ⁴
X	3 ⁴	4 ⁰	4 ⁵	5 ³	x	4 ⁴	5 ¹
Y	3 ⁶	5 ⁰	5 ⁰	6 ⁶	y	4 ⁶	5 ³
Z	3 ²	4 ⁰	4 ³	5 ³	z	3 ⁶	4 ³

Lower Case To Lower Case
Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER															
	acde		bhikl		f w		j		s t		v y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
a d h g i j	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷
l m n q u																
b f k o p s	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
c e	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
r	0 ⁶	1 ⁰	1 ²	1 ⁴	0 ⁶	1 ⁰	0 ³	0 ³	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰
t z	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
v y	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²
w	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
x	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴

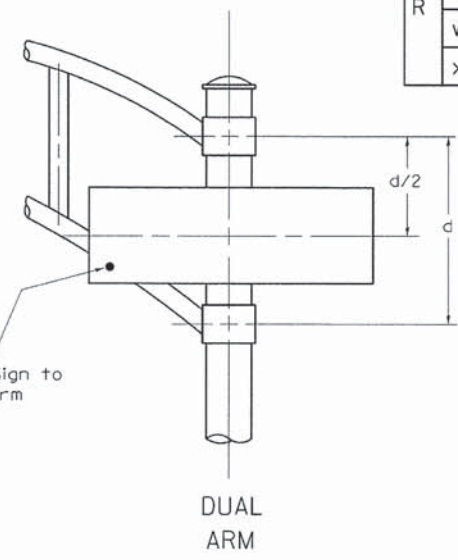
Number To Number
Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER																			
	0		1		2		3		4		5		6		7		8		9	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁶	1 ⁷
1	2 ⁰	2 ¹	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁴	1 ⁵	2 ⁰	2 ¹	2 ⁰	2 ¹
2 3 4	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁴	1 ⁵
5	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵
6	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵
7	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁵	0 ⁵	0 ⁶	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ²	1 ⁴
8	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁴	1 ⁵

NUMBER	6 INCH SERIES		8 INCH SERIES	
	C	D	C	D
1	1 ²	1 ⁴	1 ⁵	2 ⁰
2	3 ²	4 ⁰	4 ³	5 ³
3	3 ²	4 ⁰	4 ³	5 ³
4	3 ⁵	4 ³	4 ⁷	5 ⁷
5	3 ²	4 ⁰	4 ³	5 ³
6	3 ²	4 ⁰	4 ³	5 ³
7	3 ²	4 ⁰	4 ³	5 ³
8	3 ²	4 ⁰	4 ³	5 ³
9	3 ²	4 ⁰	4 ³	5 ³
0	3 ⁴	4 ²	4 ⁵	5 ⁵

GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
- THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 8'-0".
- ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:



SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM shall be used. See Note #5.

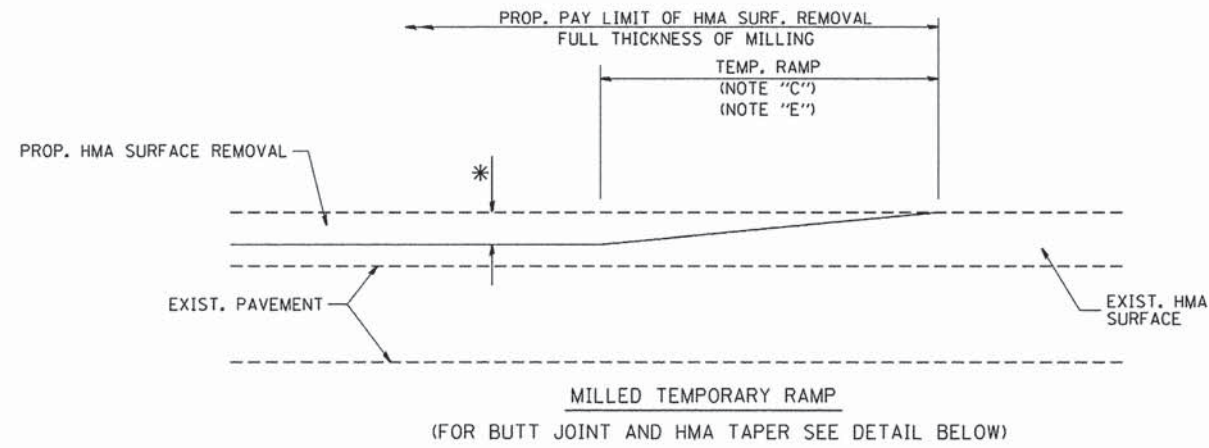
- J.O. HERBERT CO. MIDLOTHIAN, VA.
- WESTERN REMAC INC. WOODRIDGE, IL.

- PARTS LISTING:
- SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
 - SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
 - BRACKETS PART #HPN034 (UNIVERSAL)
 - CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

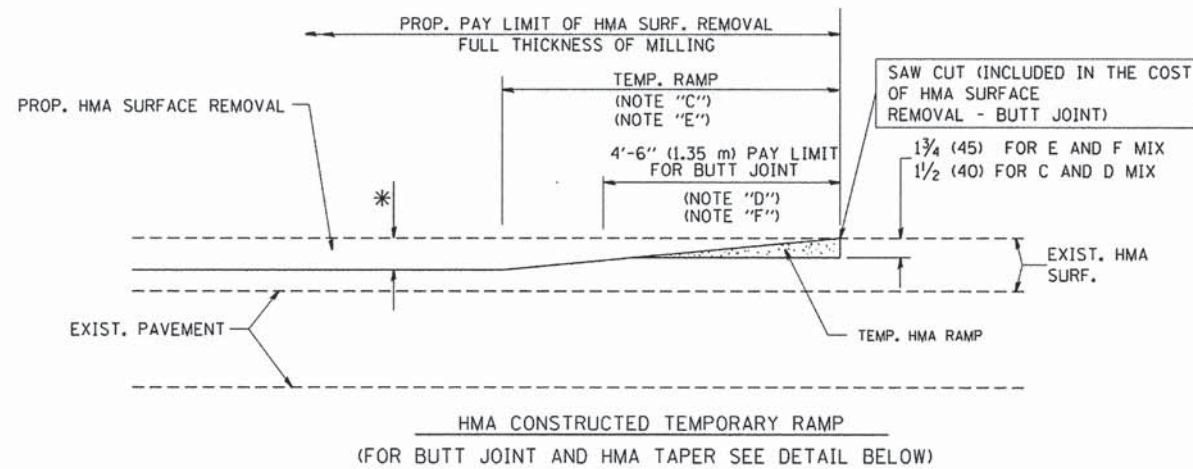
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

850 Forest Edge Drive
Vernon Hills, IL 60061
GEWALT HAMILTON ASSOCIATES, INC. P.O. BOX 188707
TEL: 815-487-1887

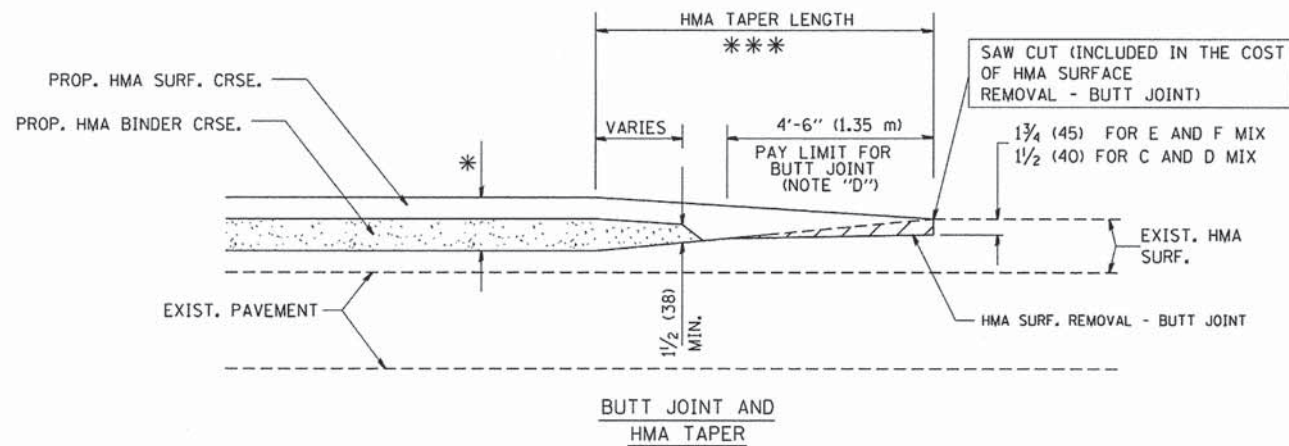
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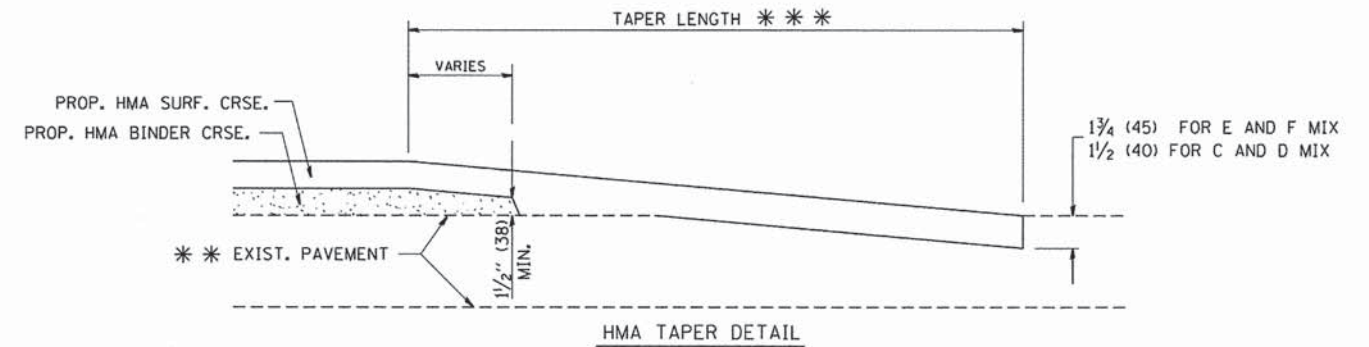
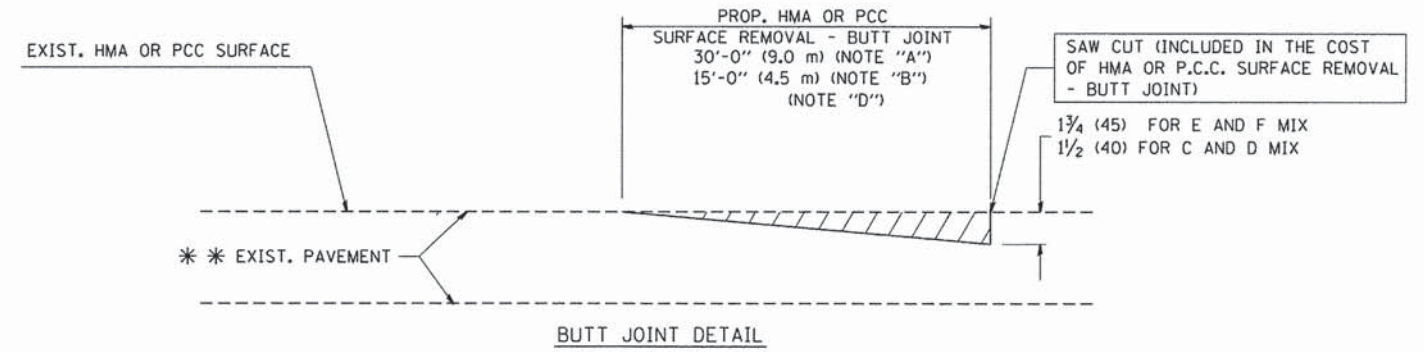
OPTION 1



**OPTION 2
TYPICAL TEMPORARY RAMP**



**TYPICAL BUTT JOINT AND HMA TAPER
FOR MILLING AND RESURFACING**



**TYPICAL BUTT JOINT AND HMA TAPER
FOR RESURFACING ONLY**

*** PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
 - B: MINOR SIDE ROADS.
 - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
 - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
 - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
 - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
 - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- *** 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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

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PLOT DATE = 1/4/2008

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DRAWN -
CHECKED -
DATE - 06-13-90

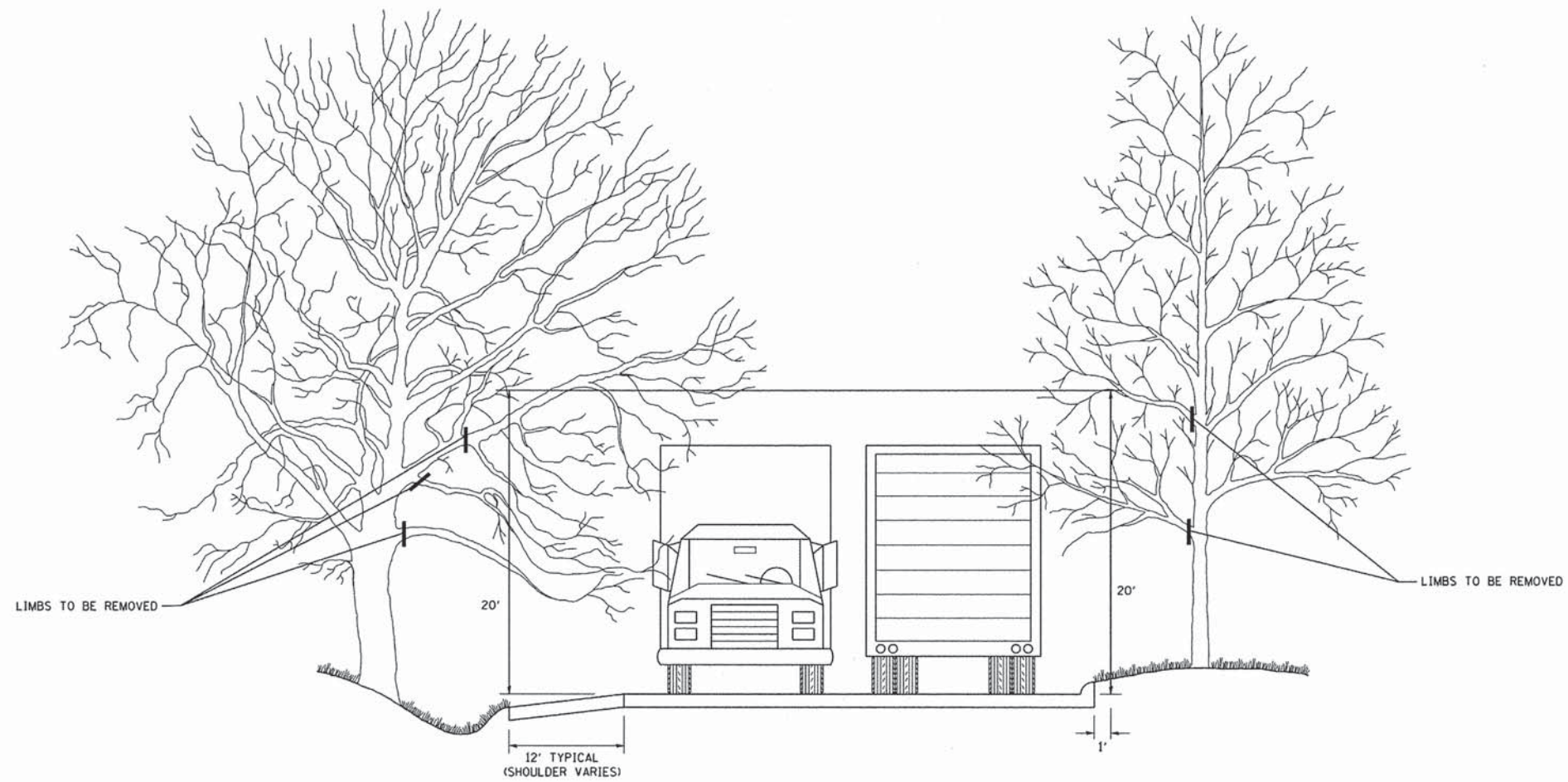
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REVISED - A. ABBAS 03-21-97
REVISED - M. GOMEZ 04-06-01
REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	25
BD400-05 BD32		CONTRACT #:	61A27	
-FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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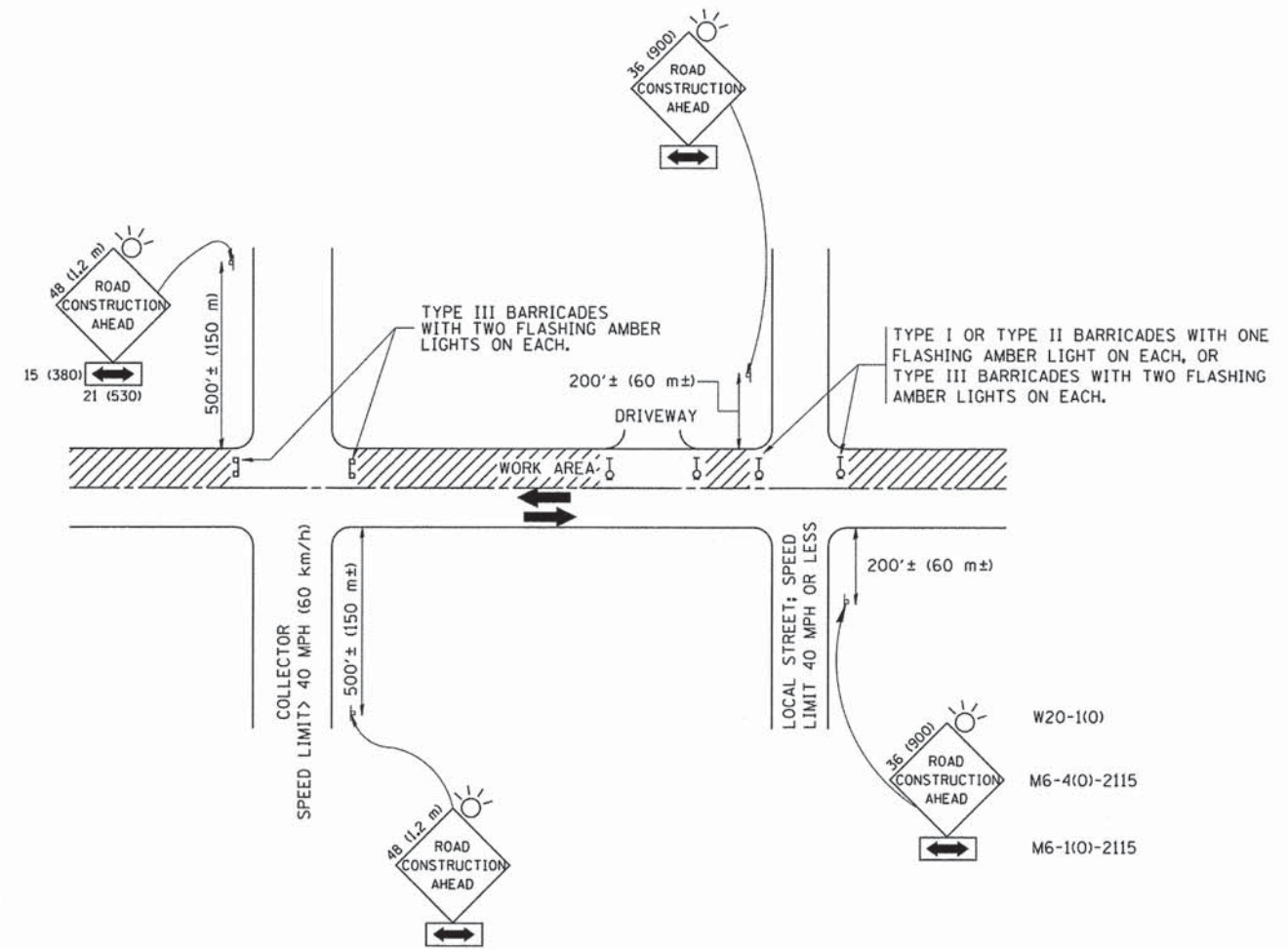
DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED - R. BORO 10-31-06
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PRUNING FOR SAFETY AND
 EQUIPMENT CLEARANCE**
 SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	26
BM-20		CONTRACT # 61A27		
-FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
 - C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
 - D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

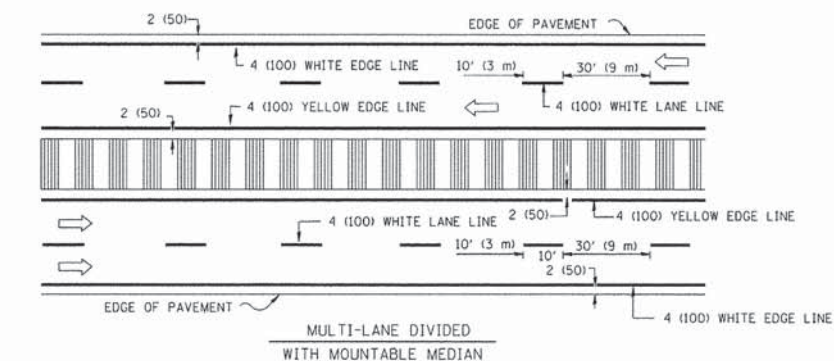
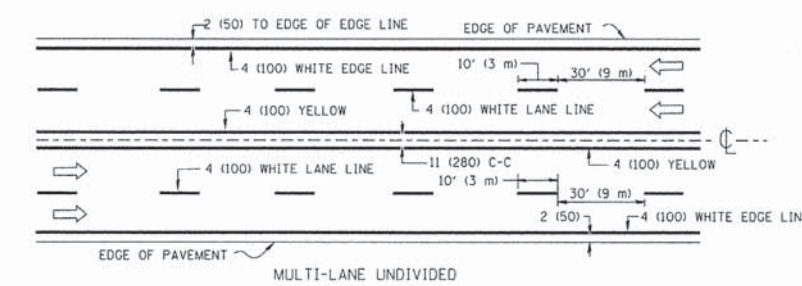
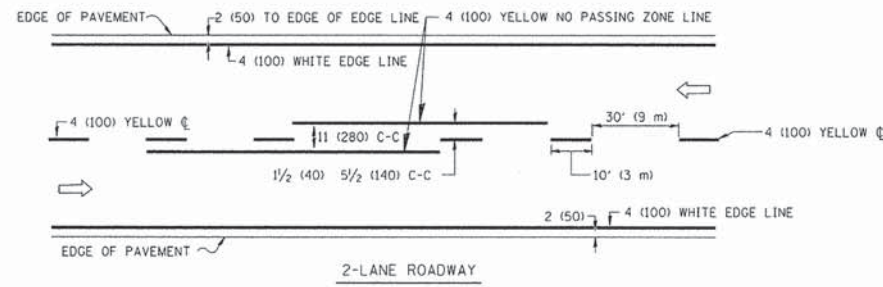
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		CHECKED -	REVISED - A. HOUSEH 10-15-96
FILE NAME = 9232.407-DT1.dwg	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

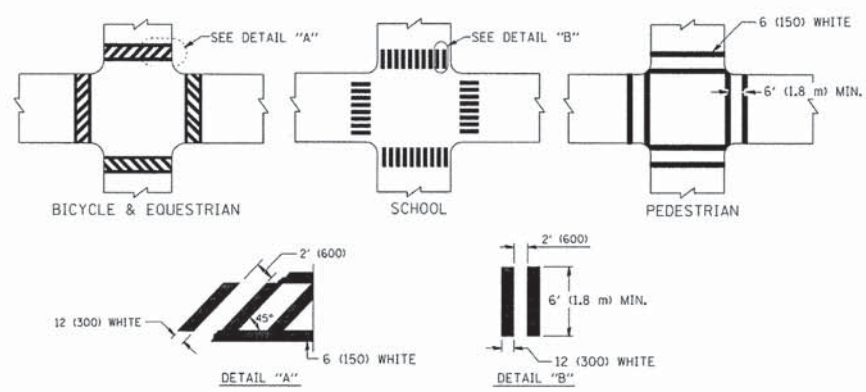
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FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-10		CONTRACT #: 61A27		
*FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				

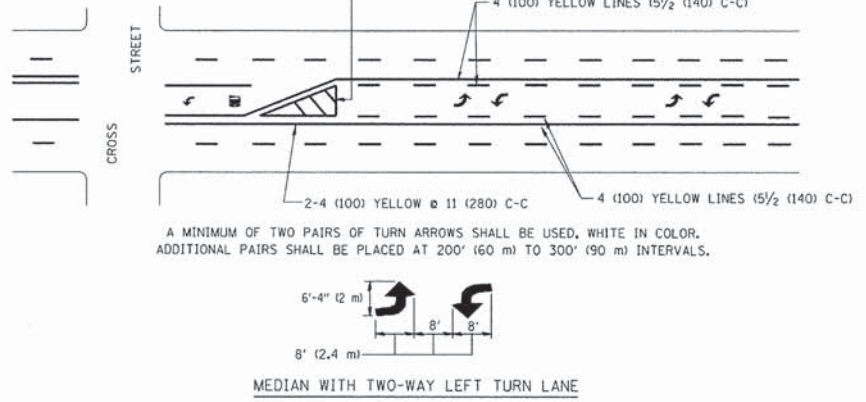
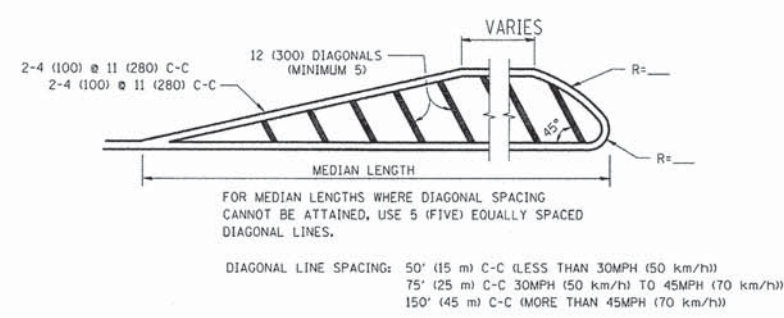
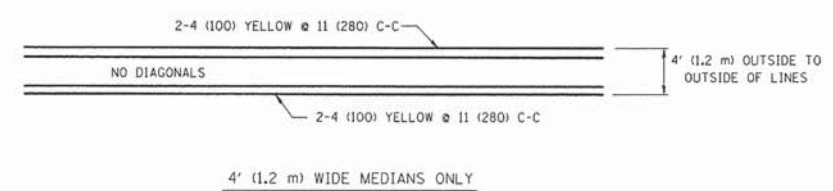


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

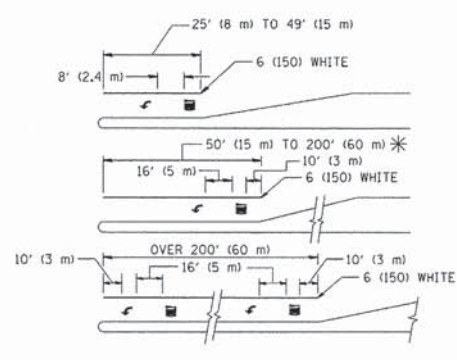
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



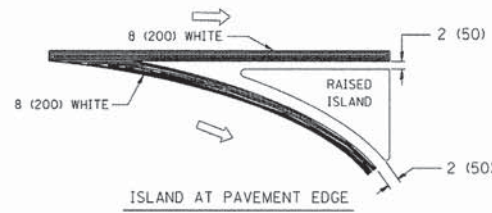
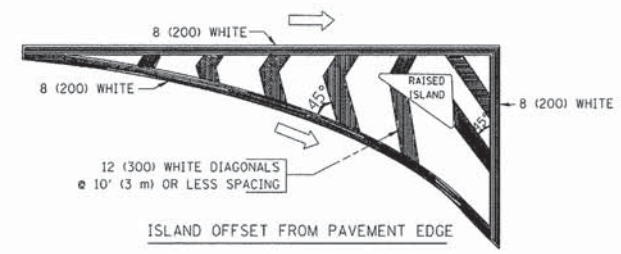
TYPICAL PAINTED MEDIAN MARKING



* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

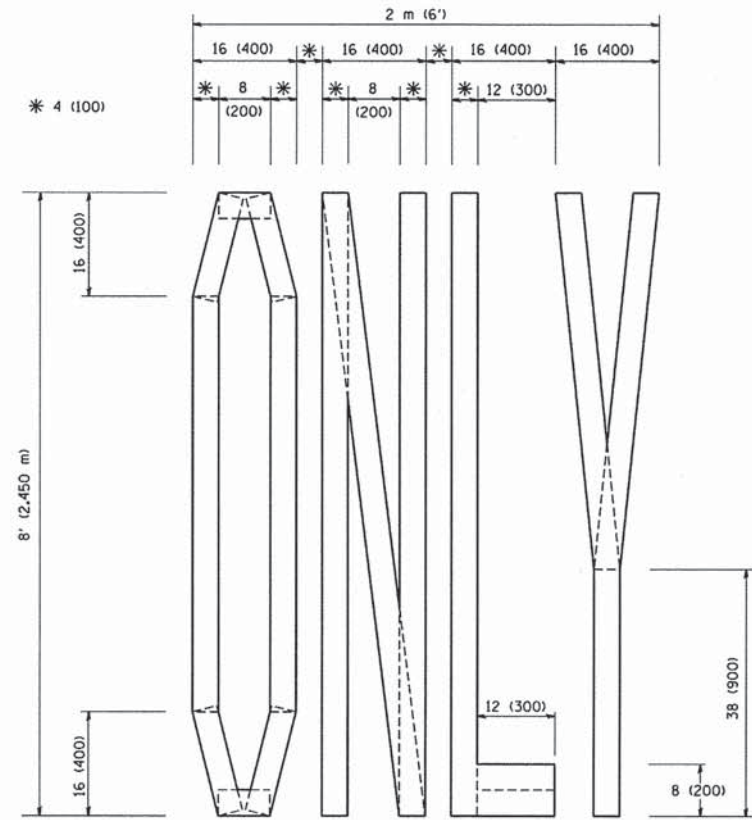
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

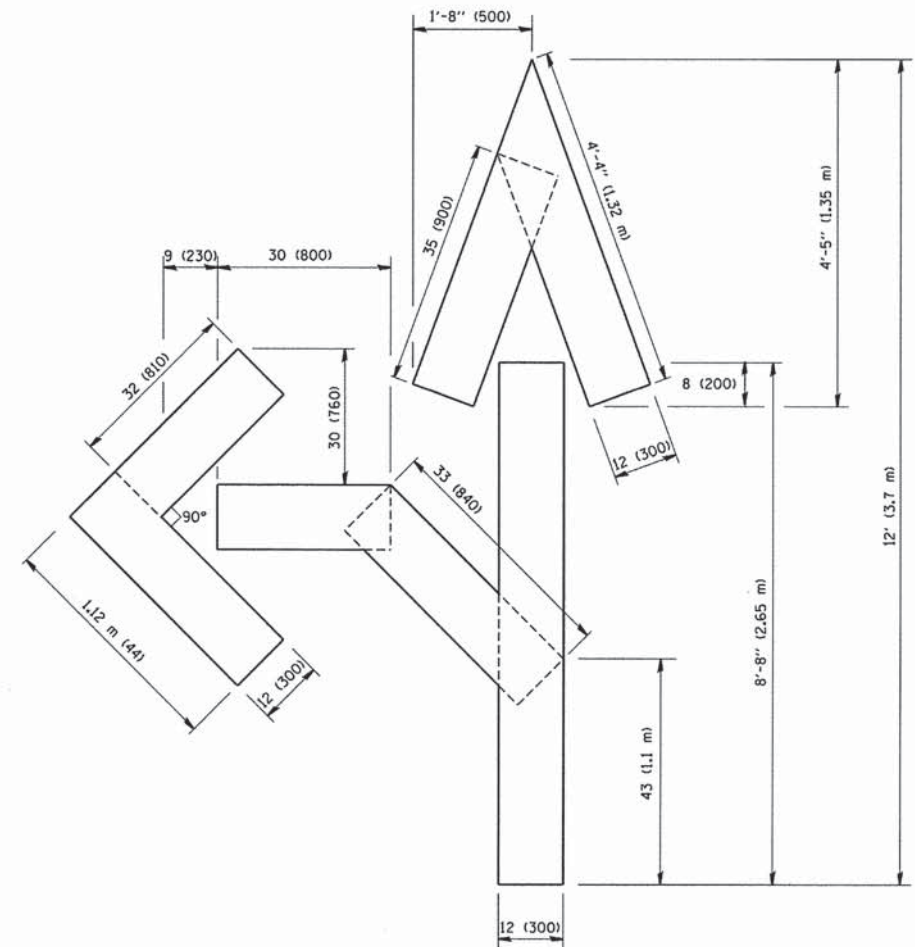
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

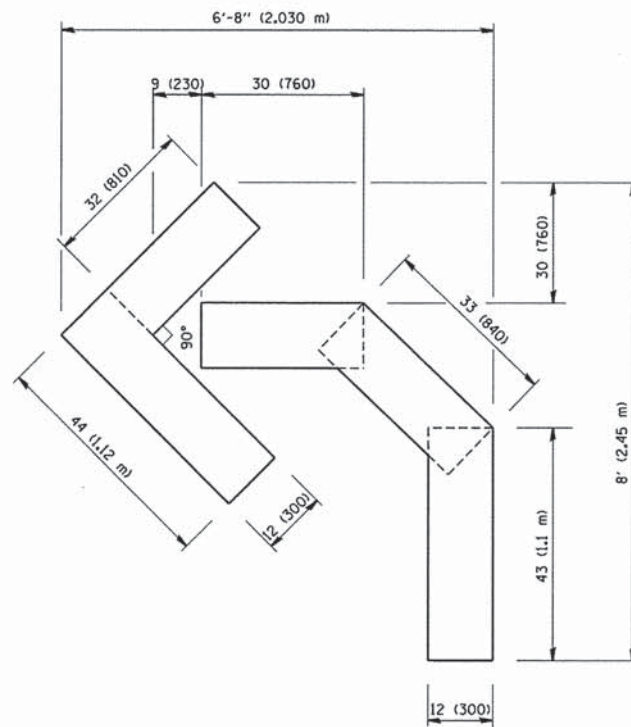
FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	28
TC-13		CONTRACT #:	61A27	
-FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



QUANTITY
 4 (100) LINE = 64.1 ft. (19.7 m)
 21.1 sq. ft. (1.97 sq. m)



QUANTITY
 4 (100) LINE = 82.5 ft. (25.3 m)
 27.5 sq. ft. (2.53 sq. m)



QUANTITY
 4 (100) LINE = 45.5 ft. (13.9 m)
 15.2 sq. ft. (1.39 sq. m)

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

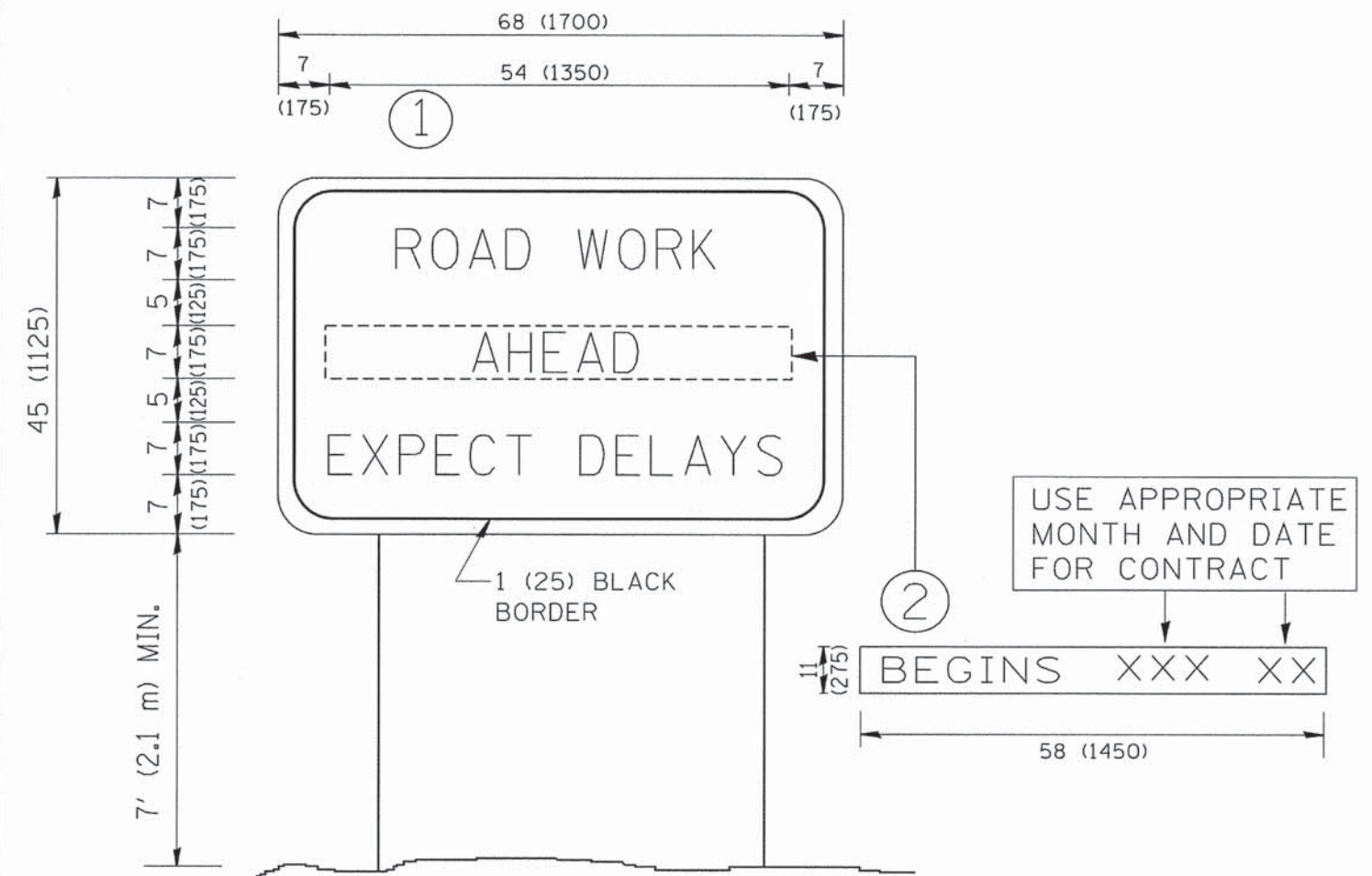
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS
 FOR TRAFFIC STAGING

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	29
TC-16		CONTRACT #	61A27	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

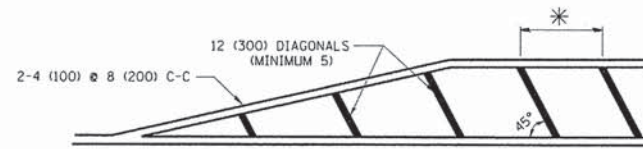
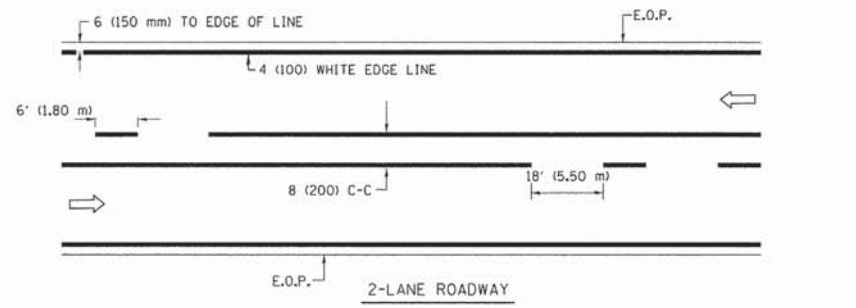
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

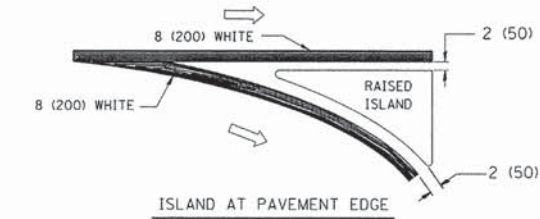
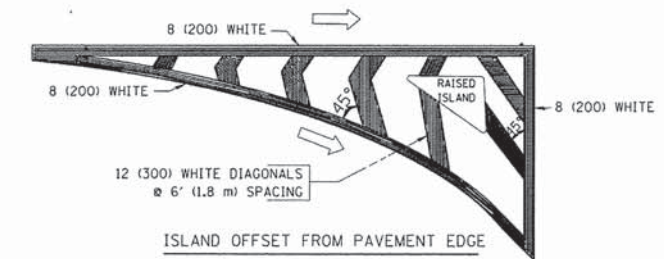
ARTERIAL ROAD
INFORMATION SIGN

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

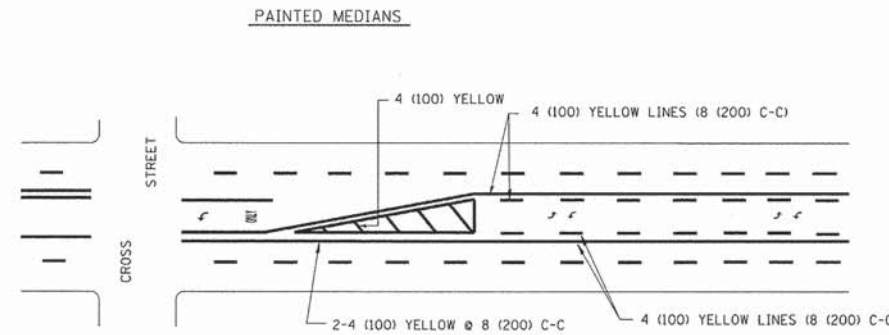
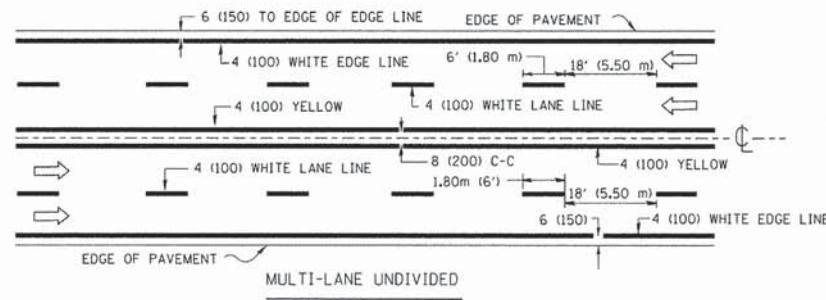
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TC-22		CONTRACT #:		61A27
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



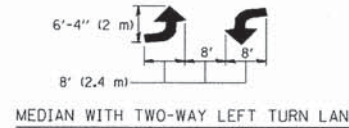
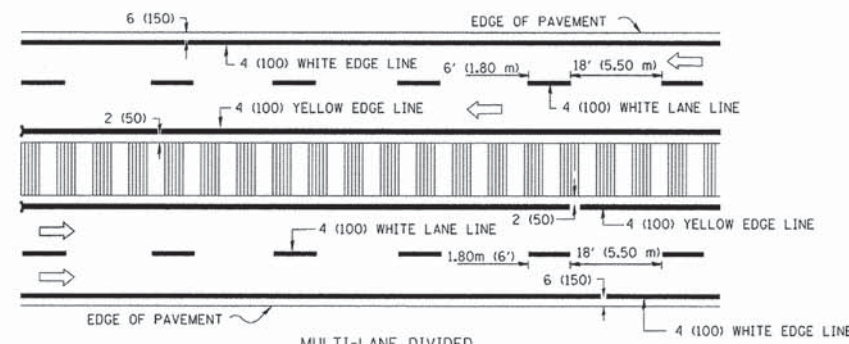
* FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 * DIAGONAL LINE SPACING: 20' (6.1 m) C-C



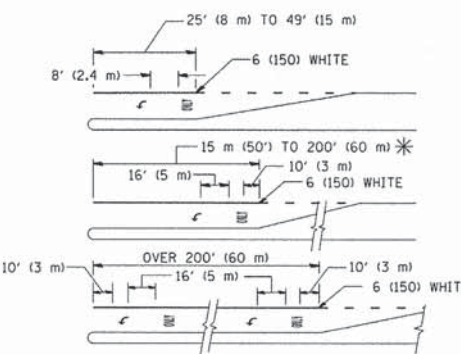
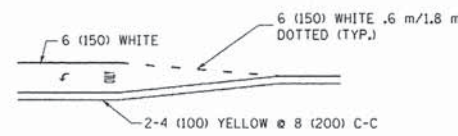
TYPICAL ISLAND MARKING



A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.8 SQ. FT. (1.47 m²) ONLY AREA = 22.9 SQ. FT. (2.13 m²)
 * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

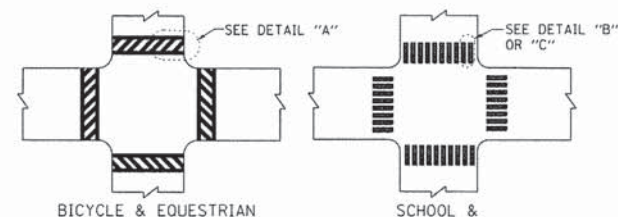
TYPICAL TURN LANE MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	8 (200) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	8 (200) C-C
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4 m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4 m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	6' (1.8 m) LINE WITH 18' (5.50 m) SPACE FOR SKIP-DASH; 8 (200) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL & PEDESTRIAN)	12 (300) @ 45° 24 (600) @ 90°	SOLID SOLID	WHITE WHITE	2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45°	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	8 (200) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 20' (6.1 m) (LESS THAN 30 MPH (50 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15' 6" (4.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)

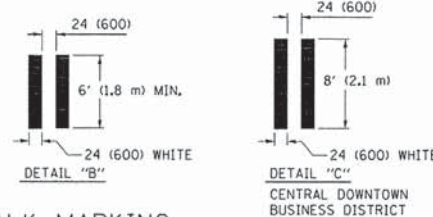
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STREET MARKING STANDARDS, PRINTED BY CITY OF CHICAGO, DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC.

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

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



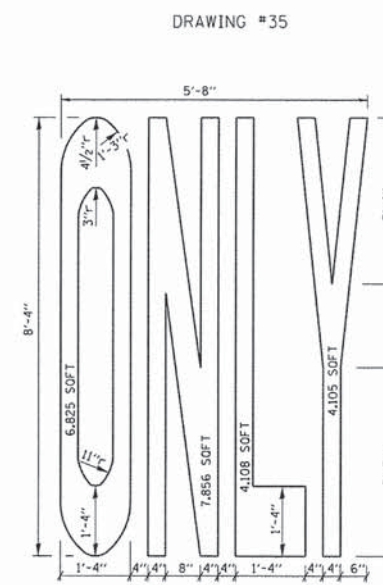
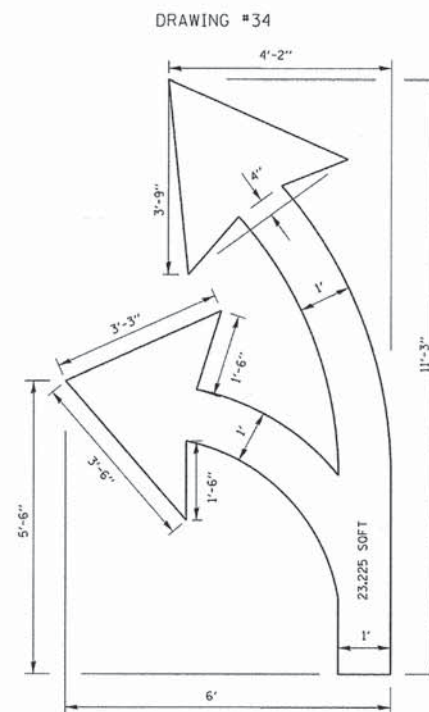
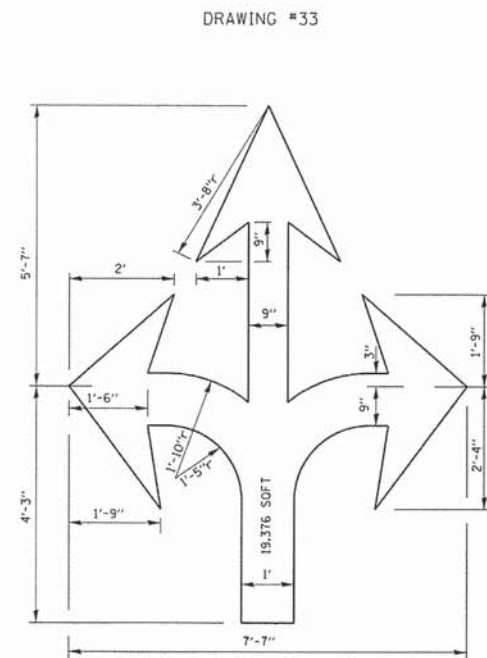
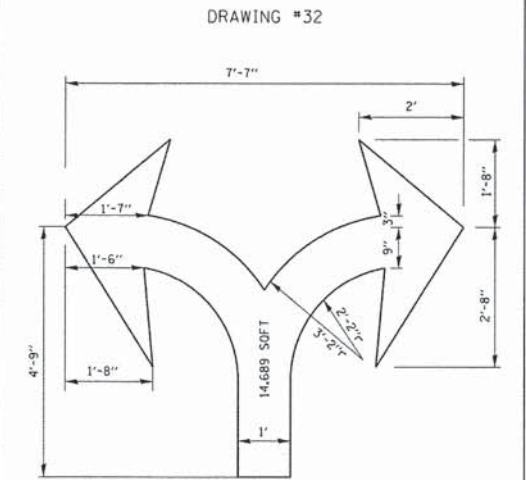
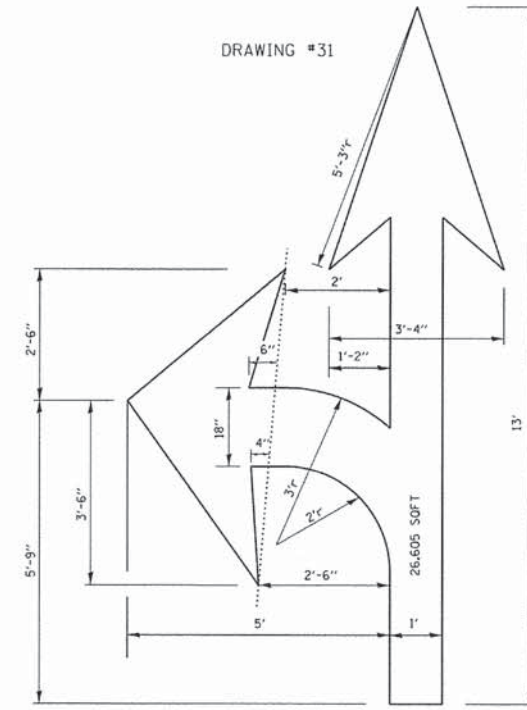
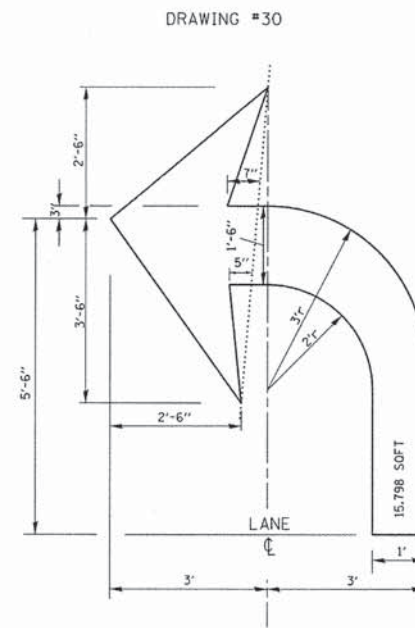
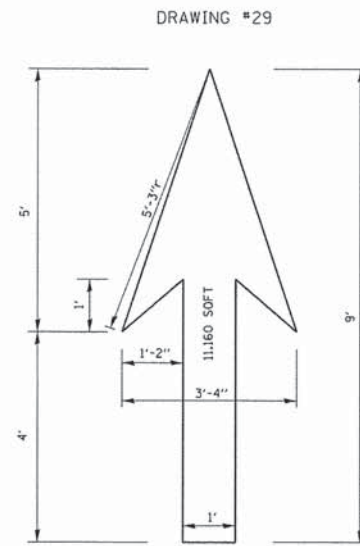
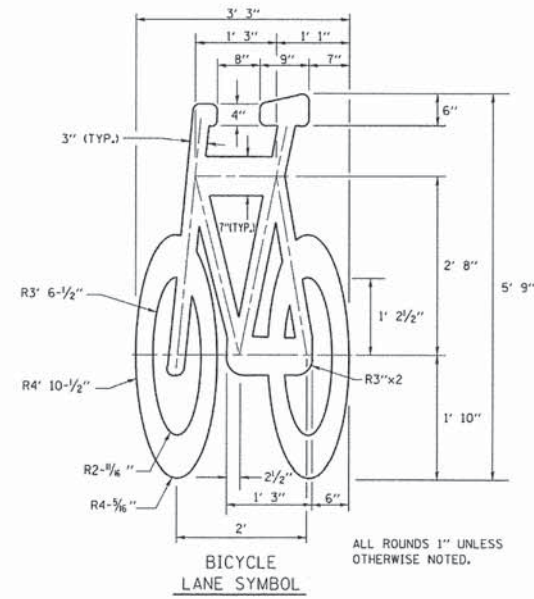
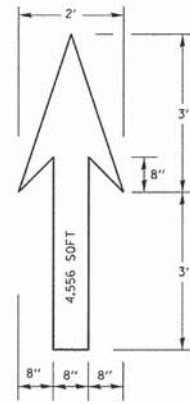
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET NO. 1 OF 3 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
279B	12-00058-00-TL	COOK	41	31
	TC-24	CONTRACT #	61A27	
*FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



NOTE:
ALL MARKINGS SHALL BE SOLID WHITE UNLESS OTHERWISE NOTED IN THE PLANS

- NOTE:**
- FOR BIKE LANE SYMBOLS ONLY, USE PRE-FORMED THERMOPLASTIC WITH A MINIMUM THICKNESS OF 90 MILS, MINIMUM SKID RESISTANCE VALUE OF 60 BPN, & A MINIMUM INDEX OF REFRACTION OF 1.50.
 - THE RESIDENT ENGINEER SHALL CONTACT MR. BEN GOMBERG AT 312-744-8093 AT LEAST ONE CALENDAR WEEK PRIOR TO INSTALLING BIKE LANE SYMBOLS.

TYPICAL BIKE LANE SYMBOLS
DRAWING #28

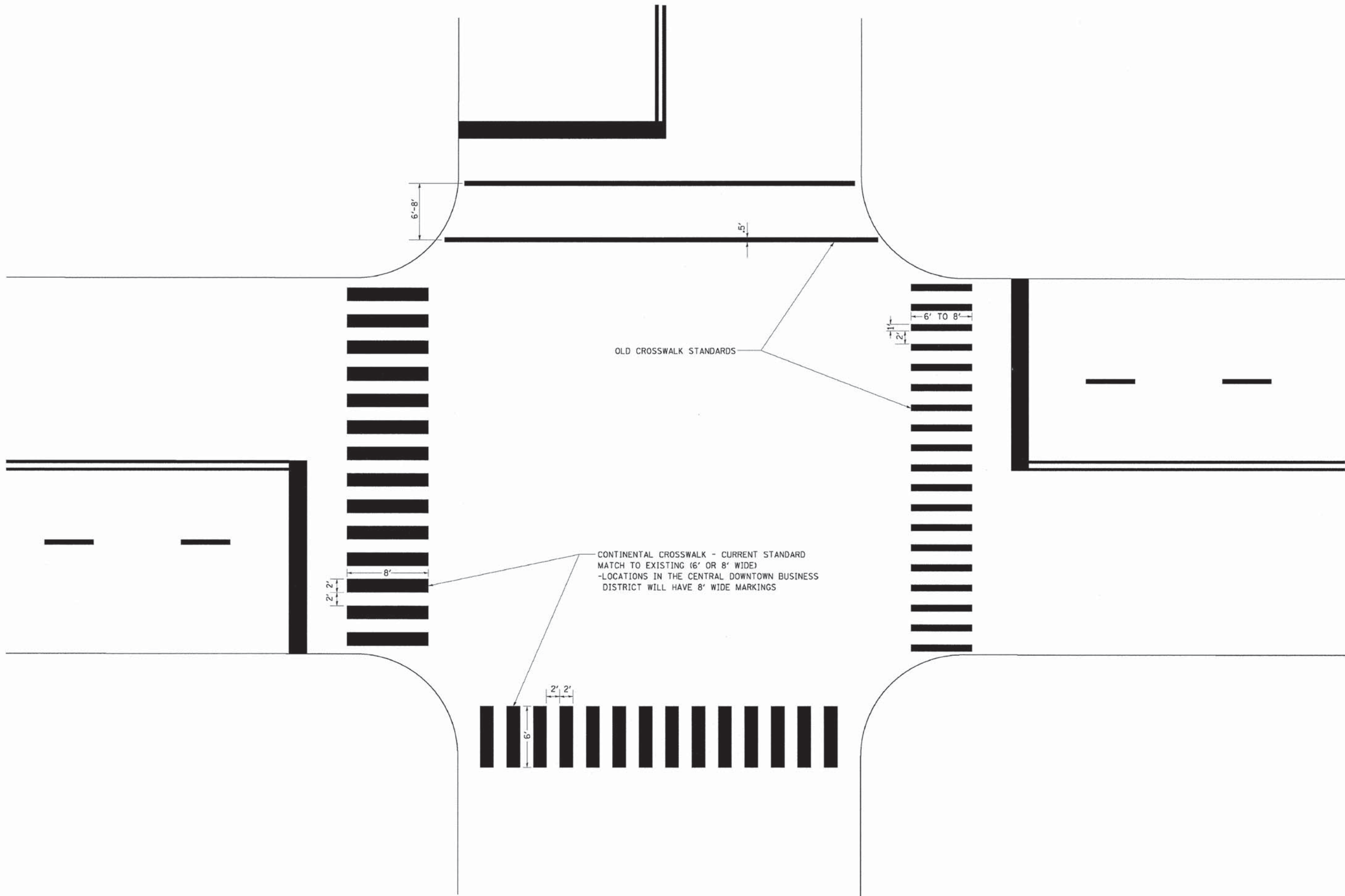
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
TYPICAL PAVEMENT MARKINGS

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FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	32
TC-24		CONTRACT #		61A27
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



OLD CROSSWALK STANDARDS

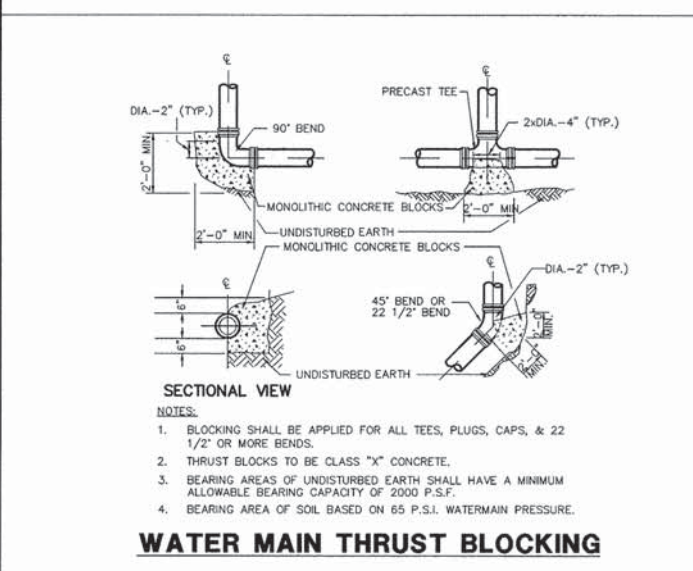
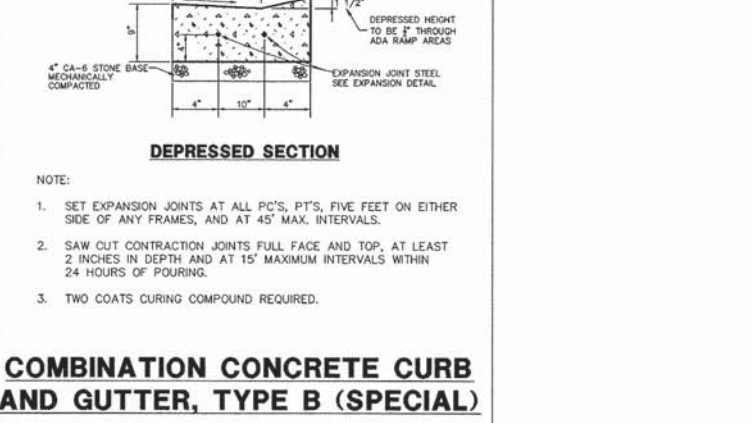
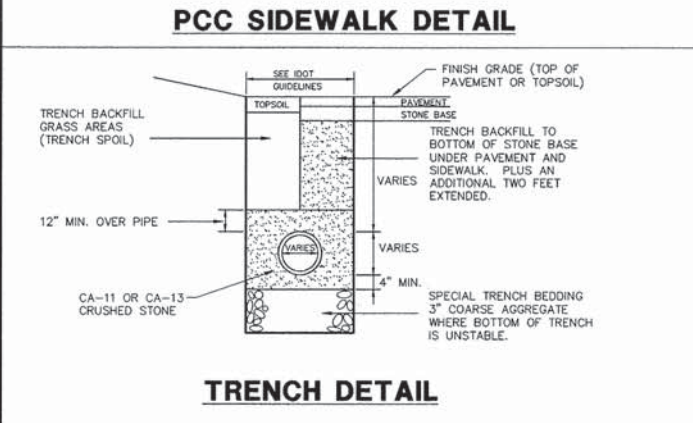
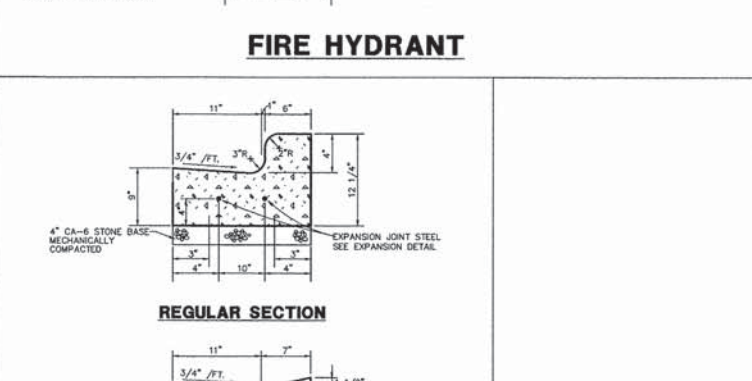
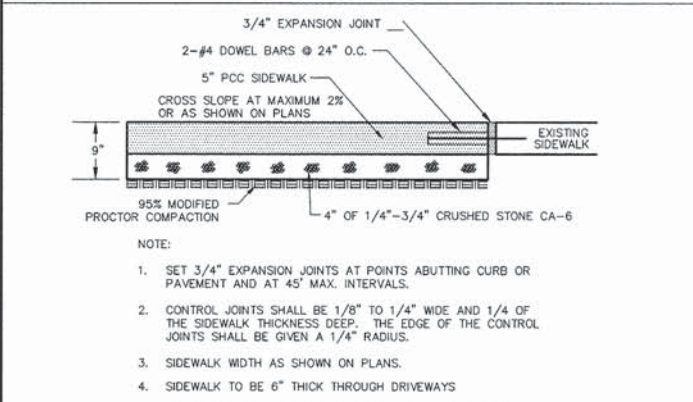
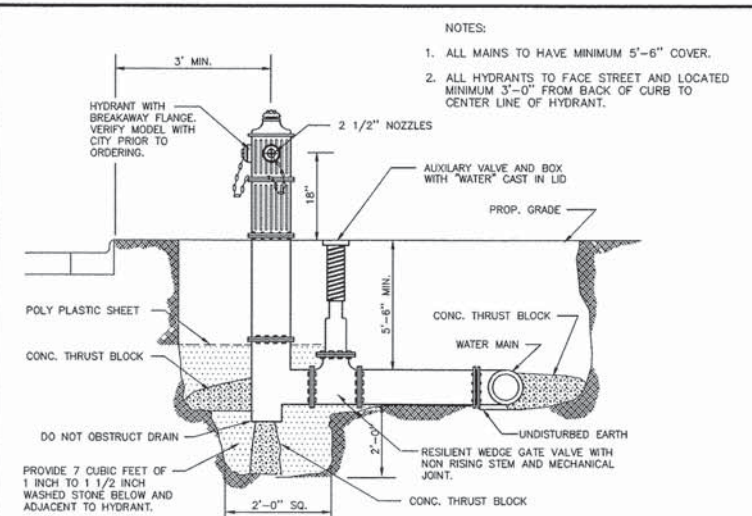
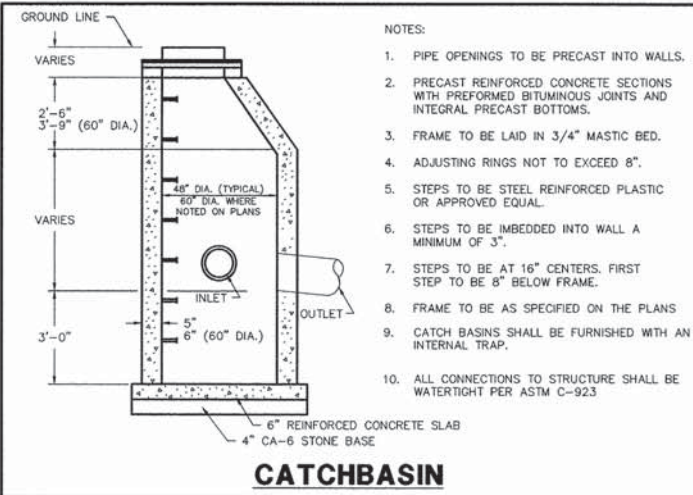
CONTINENTAL CROSSWALK - CURRENT STANDARD
 MATCH TO EXISTING (6' OR 8' WIDE)
 -LOCATIONS IN THE CENTRAL DOWNTOWN BUSINESS
 DISTRICT WILL HAVE 8' WIDE MARKINGS

FILE NAME =	USER NAME = drivakoegn	DESIGNED -	REVISED - T. RAMMACHER 12-07-00
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	PLLOT SCALE = 50.000' / in.	CHECKED -	REVISED -
FILE NAME = 9232.407-011.dwg	PLLOT DATE = 3/29/2012	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CITY OF CHICAGO	
TYPICAL PAVEMENT MARKINGS	
SCALE: NONE	SHEET NO. 3 OF 3 SHEETS STA. TO STA.

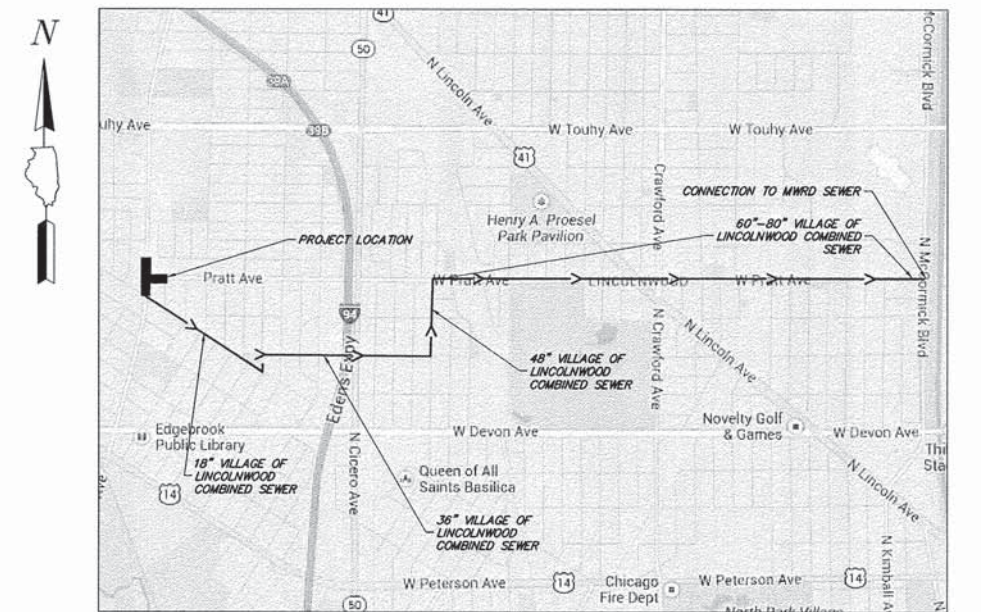
FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	33
TC-24		CONTRACT #:	61A27	
-FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

MWRD TYPICAL GENERAL NOTES

- THE MWRD LOCAL SEWER SYSTEMS FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).
 - ALL ELEVATIONS ARE BASED ON NAVD 88 DATUM.
 - ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM. (NONE PROPOSED)
 - ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM. (NONE PROPOSED)
 - ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINT IN COMBINED SEWER AREA) SHALL CONFORM TO:
- | PIPE MATERIAL SPEC. | JOINT SPEC. | PIPE MATERIAL SPEC. | JOINT SPEC. |
|---|--------------------------|---|--------------------------------------|
| VITRIFIED CLAY PIPE
VCP C-700 | C-425 | ABS COMPOSITE/TRUSS PIPE
8"-15" DIA.
ABS D-2751 | D-2751 |
| VCP (NO-BELL) COLLAR
C-700 | C-425
D-1784 | PVC GRAVITY SEWER PIPE
8"-15" DIA. SDR 28 D-3034
18"-27" DIA. F/DY=46 F-679 | D-3212 OR D-2855
D-3212 OR D-2855 |
| CONCRETE PIPE C-14
RCP C-76
ACP C-428 | C-443
C-443
D-1869 | CISP A-74
DIP A-21.61 | C-564
A-21.11 |
| ABS SEWER PIPE
8"-15" DIA. ABS D-2680 | D-2680 | | |
- ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE 1/2" TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIALS SHALL BE CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
 - "BAND SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR MATERIALS.
 - 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:
 - 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.
 - REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
 - 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.
 - WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMANS 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 WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED ABOVE CAN NOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATERMAIN, THE SEWER SHALL BE CONSTRUCTED TO WATERMAIN STANDARDS.
 - ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
 - 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.
 - WATERTIGHT FLEXIBLE RUBBER CONNECTORS, CONFORMING TO A.S.T.M. C-923 WITH STAINLESS STEEL BAND, SHALL BE PROVIDED FOR SEWER CONNECTIONS WITH GREASE BASIN AND TRIPLE BASIN.
 - EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TO BE TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS OR STORM SEWERS TRIBUTARY TO MWRD SEWERS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS OR STORM SEWERS TRIBUTARY TO MWRD SEWERS INCLUDING ALL SANITARY, STORM AND COMBINED STRUCTURES.
 - ALL ABANDONED SEWERS/FORCE MAINS SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FEET NON SHRINK CONCRETE/MORTAR PLUGS.



850 Forest Edge Drive
Vernon Hills, IL 60061
CHA GEVAULT HAMILTON
ASSOCIATES, INC. P.O. BOX 183020
CHICAGO, IL 60618

FILE NAME = 9232.407-011.dwg	USER NAME = BRIAN WESOLOWSKI	DESIGNED - BJW	REVISED - -
		DRAWN - ZCW	REVISED - -
		CHECKED - SDB	REVISED - -
		DATE - 1/31/14	REVISED - -

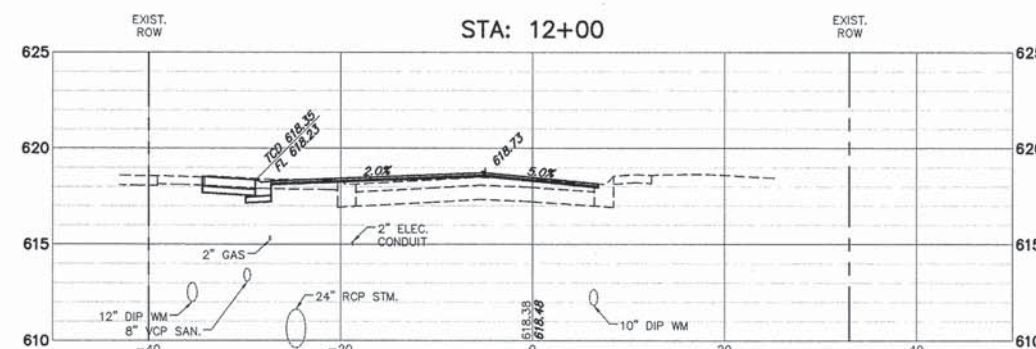
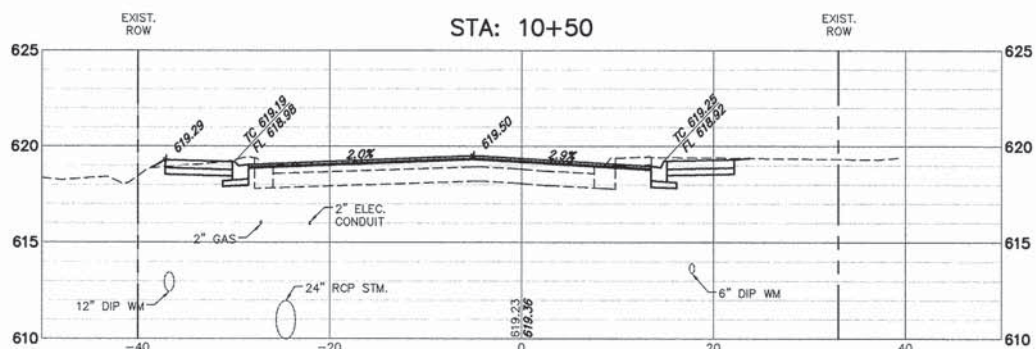
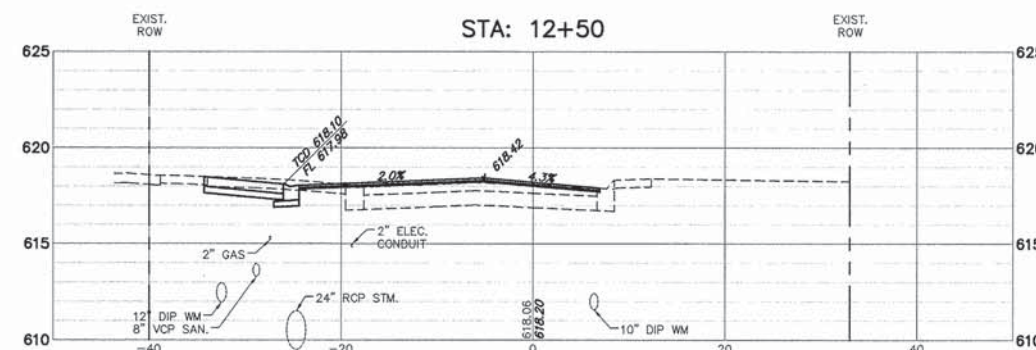
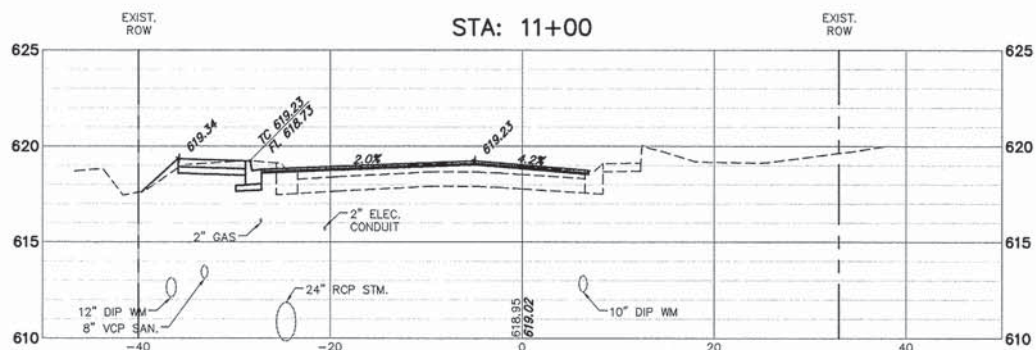
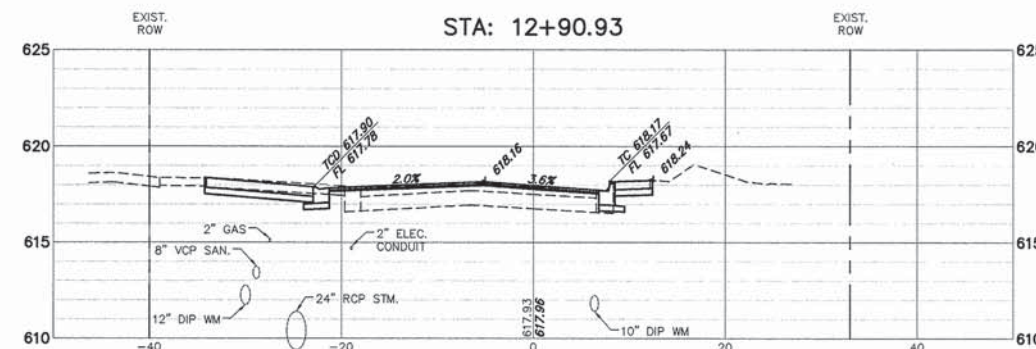
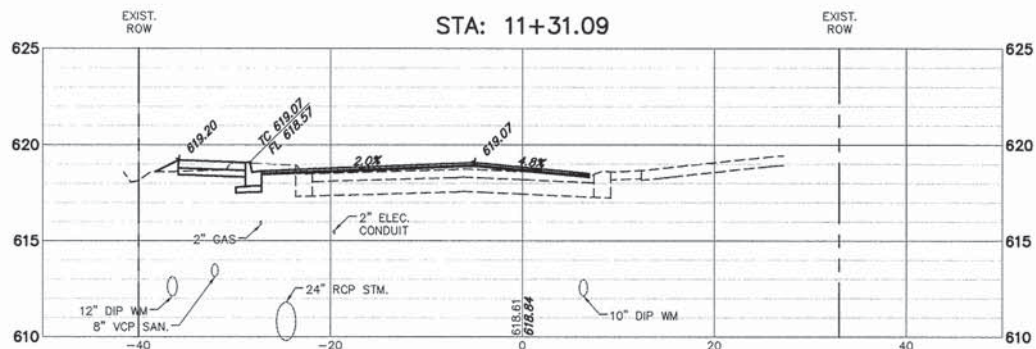
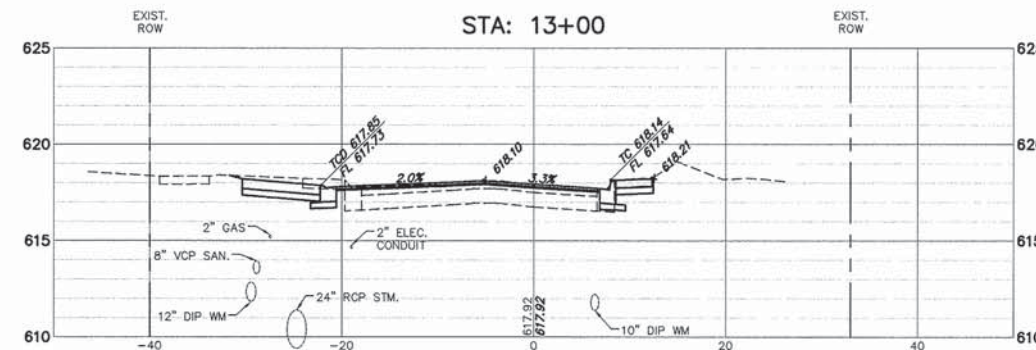
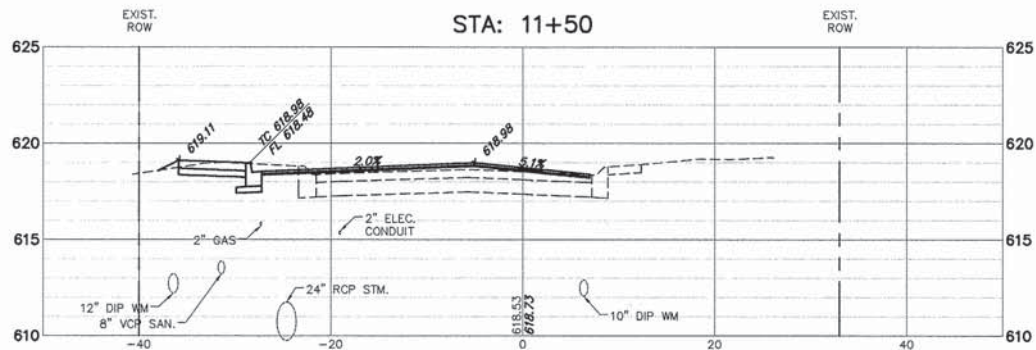
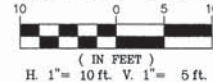
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

MWRD GENERAL NOTES AND DETAILS

SCALE NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
279B	12-00058-00-TL	COOK	41	34
CONTRACT #			61A27	
ILLINOIS FED. AID PROJECT				

GRAPHIC SCALE



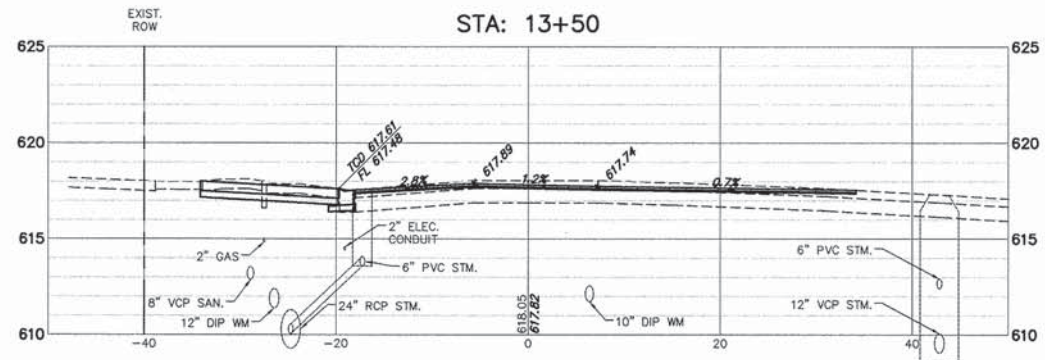
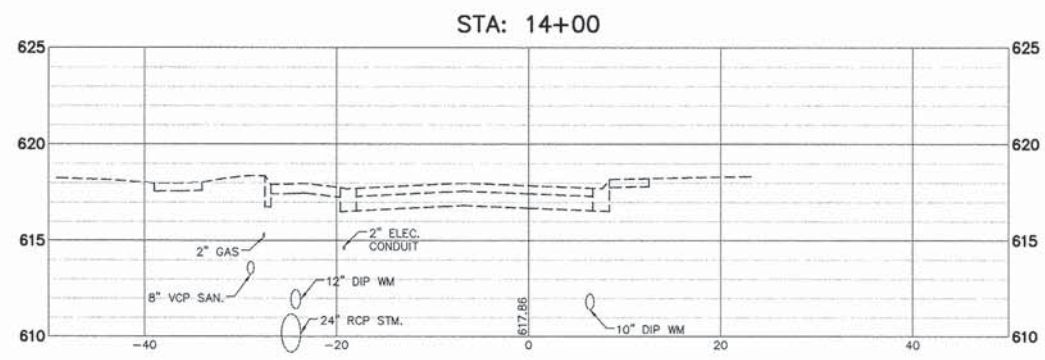
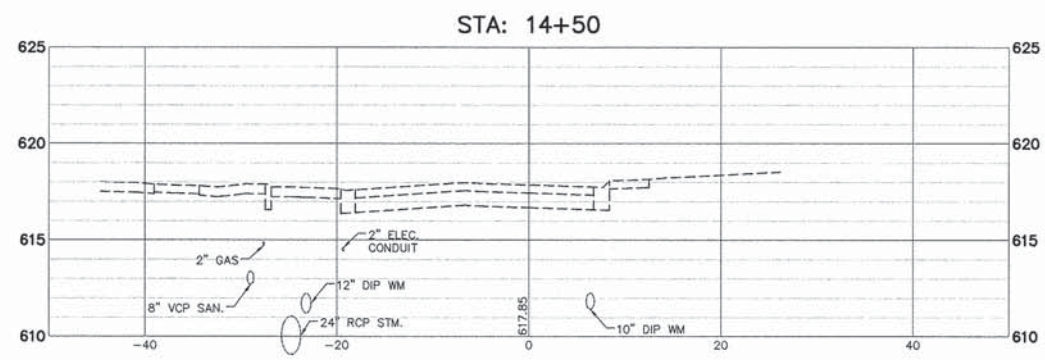
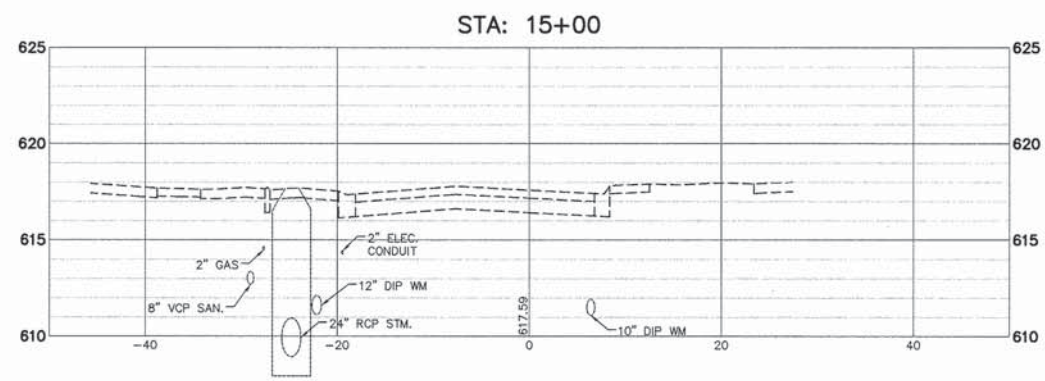
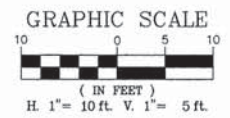
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9232.407 PR-1.dwg		DRAWN - ZCW	REVISED - -
	PLOT SCALE = 1"=10'	CHECKED - SDB	REVISED - -
	PLOT DATE = 1/31/14	DATE - 1/31/14	REVISED - -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PRATT AVENUE CROSS SECTIONS
INTERSECTION AND SIGNAL IMPROVEMENTS**

SCALE 1"=20' SHEET NO. - OF - SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	35
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



CH2M HILL
 GEVAULT HAMILTON
 ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 PH. (847) 489-2000
 FAX (847) 489-2001

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=10'
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

REVISED - -
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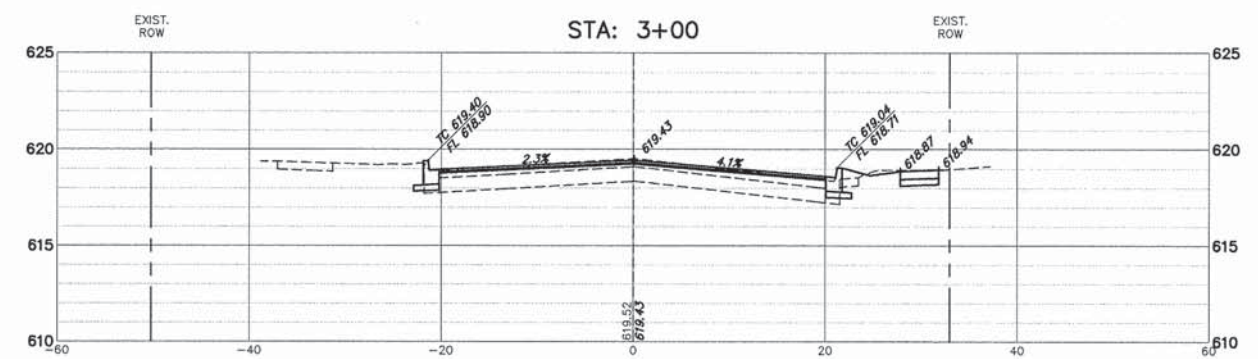
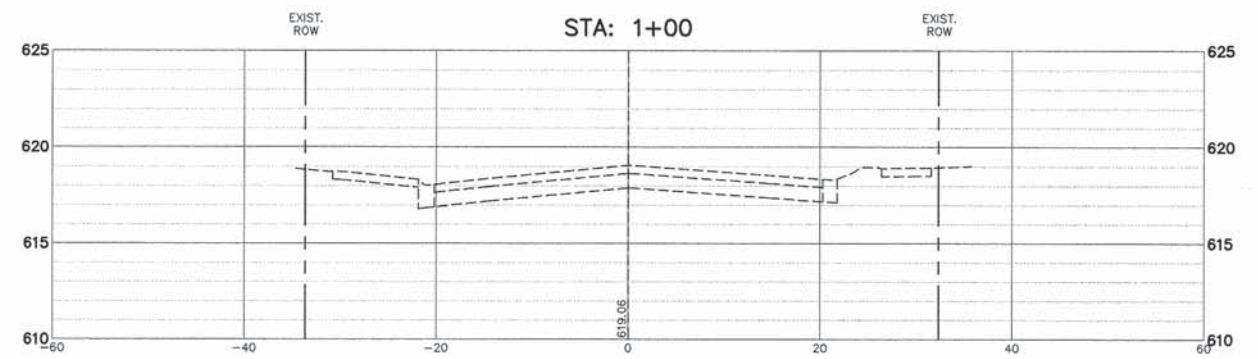
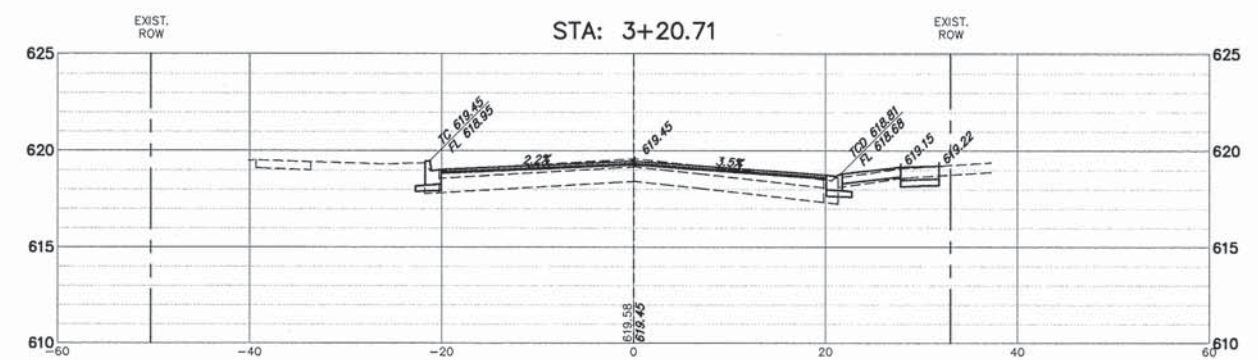
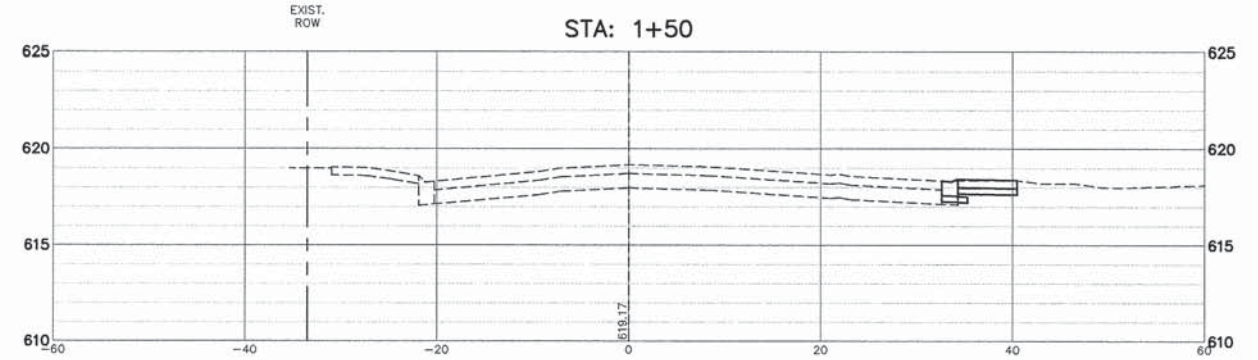
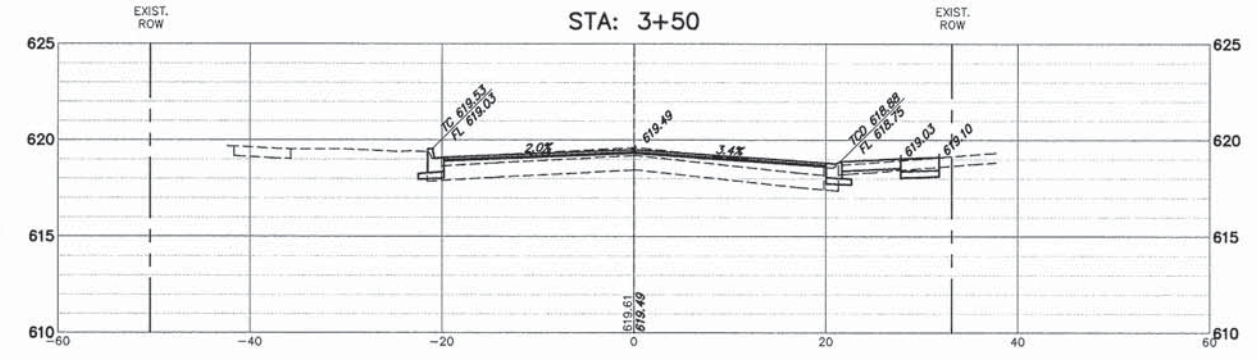
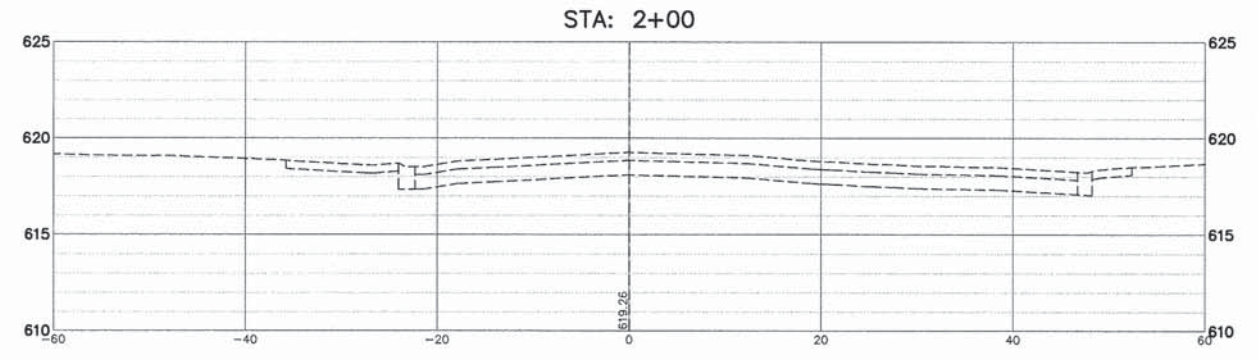
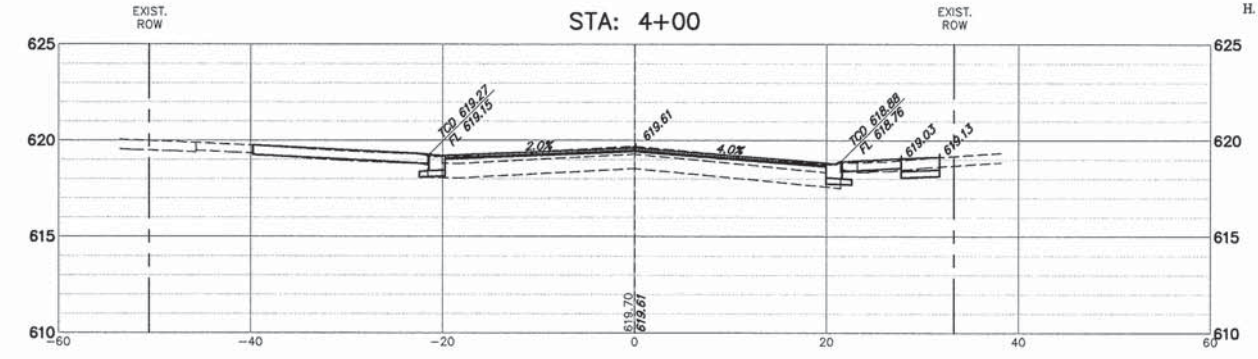
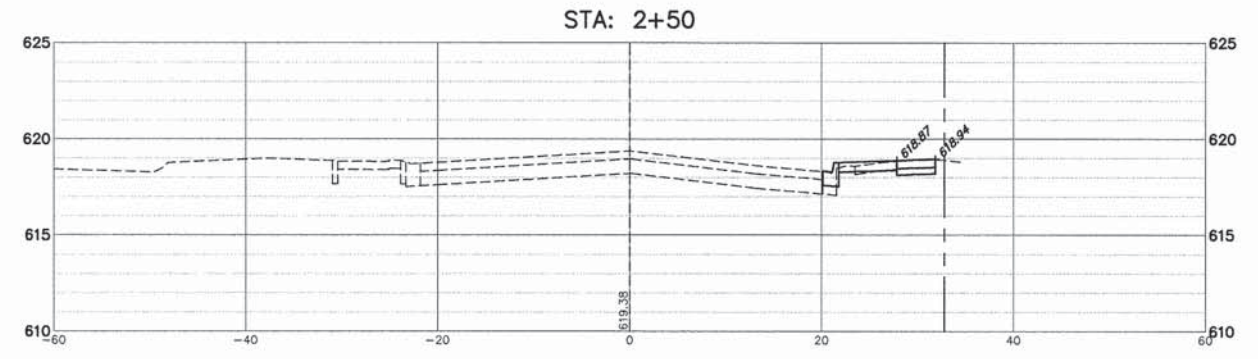
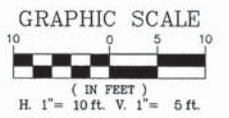
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PRATT AVENUE CROSS SECTIONS
 INTERSECTION AND SIGNAL IMPROVEMENTS**

SCALE 1"=20' SHEET NO. - OF - SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	36
CONTRACT #:			61A27	

ILLINOIS FED. AID PROJECT



CHA GEWALD HAMILTON ASSOCIATES, INC. 850 Forest Edge Drive, Vernon Hills, IL 60061, P.O. Box 8871, Vernon Hills, IL 60061, Tel: (847) 439-2000, Fax: (847) 439-2001

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=10'
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

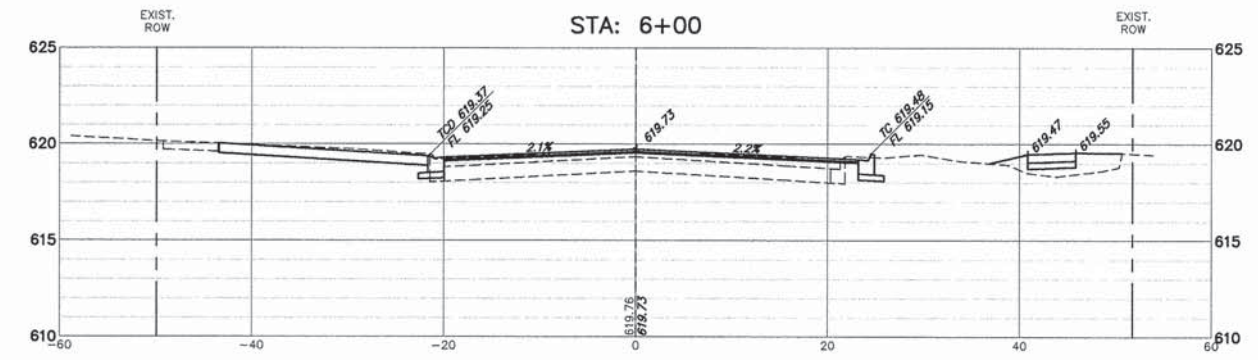
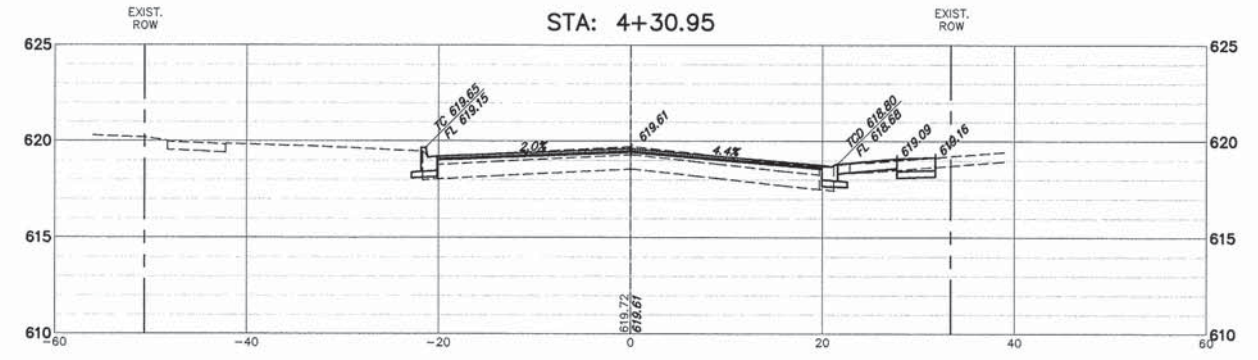
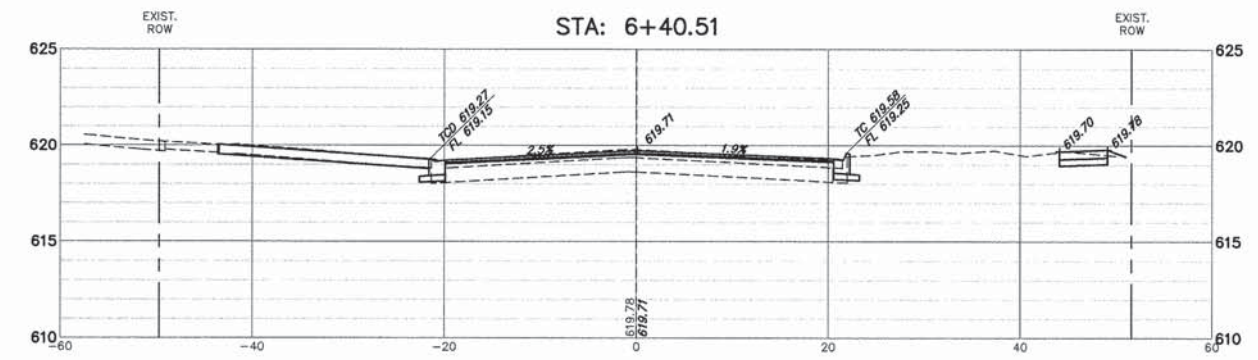
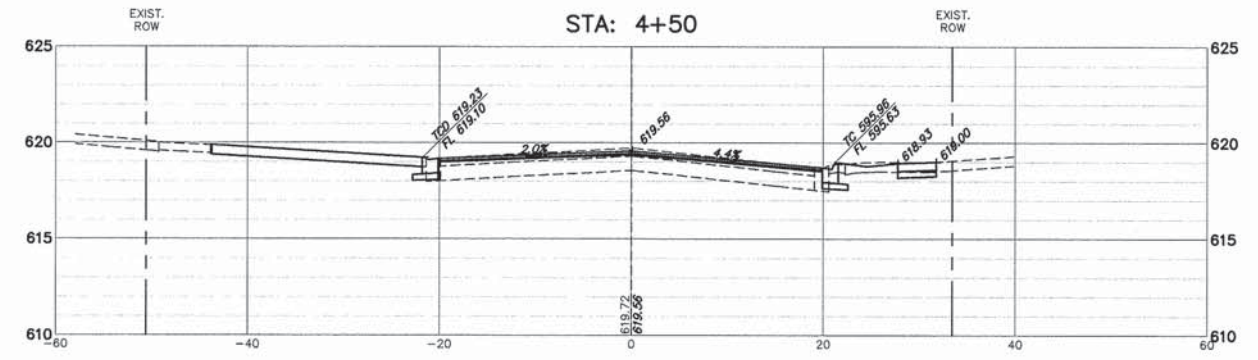
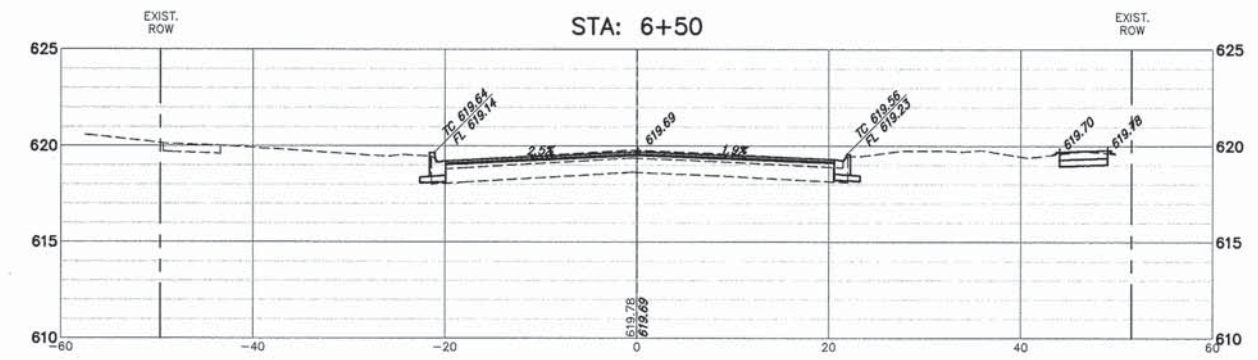
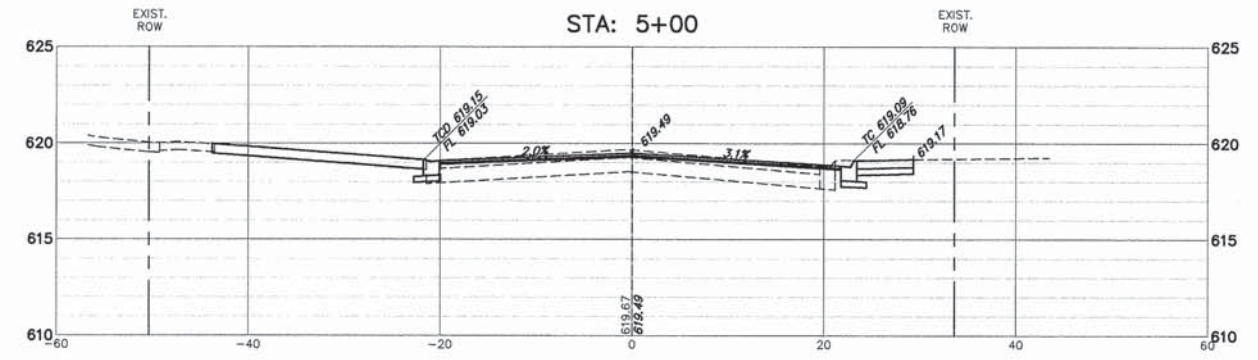
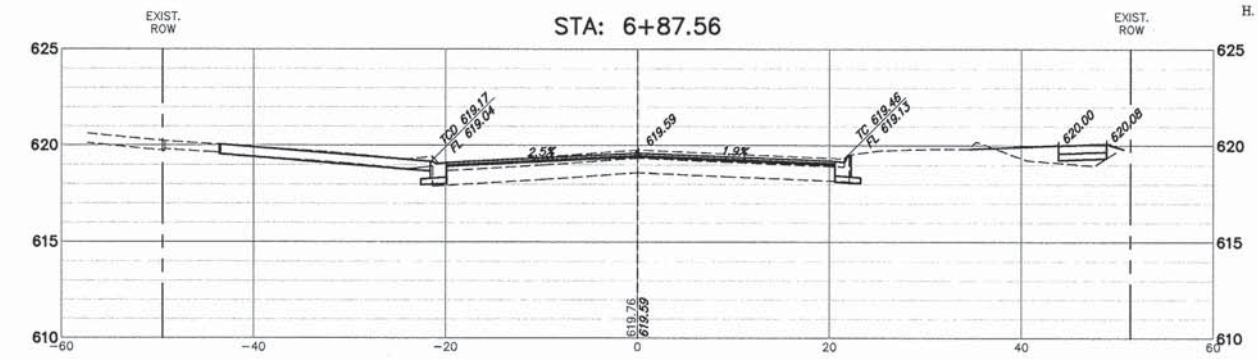
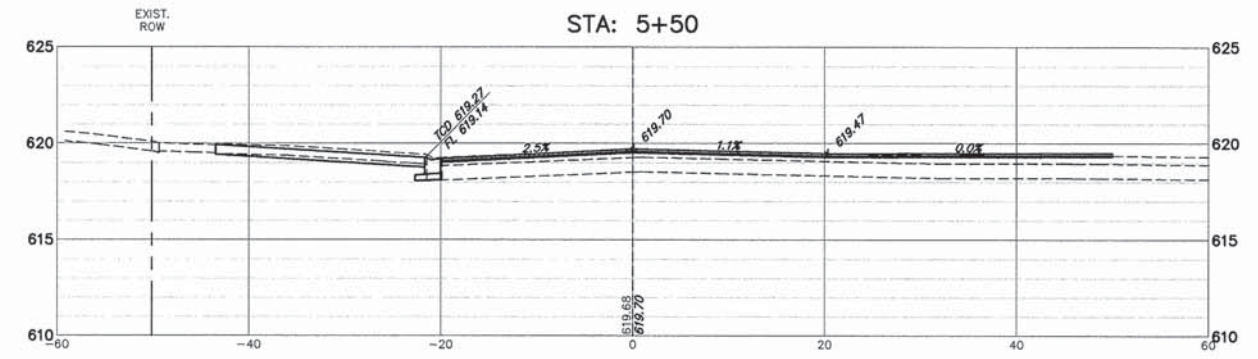
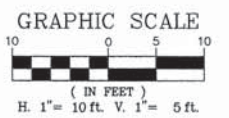
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE CROSS SECTIONS
 INTERSECTION AND SIGNAL IMPROVEMENTS**

SCALE 1"=20' SHEET NO. - OF - SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	37
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



CHA GEWALT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 P.O. Box 8877, Vernon Hills, IL 60061

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=10'
 PLOT DATE = 1/31/14

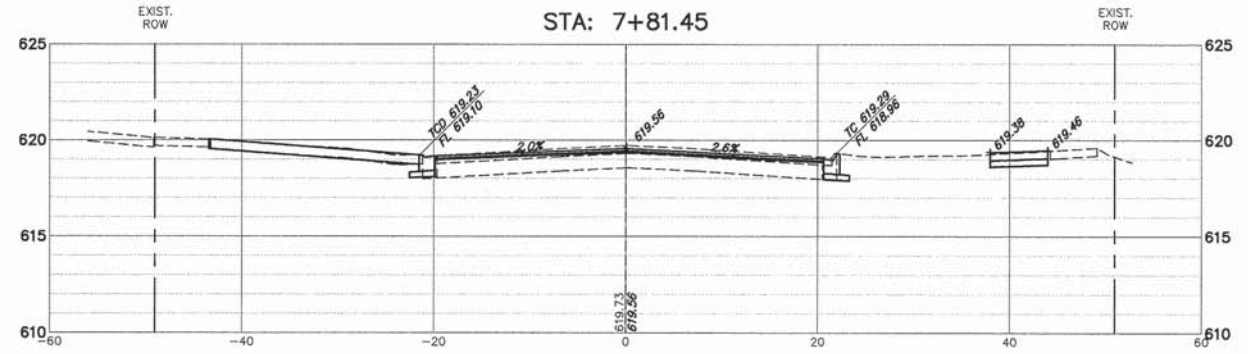
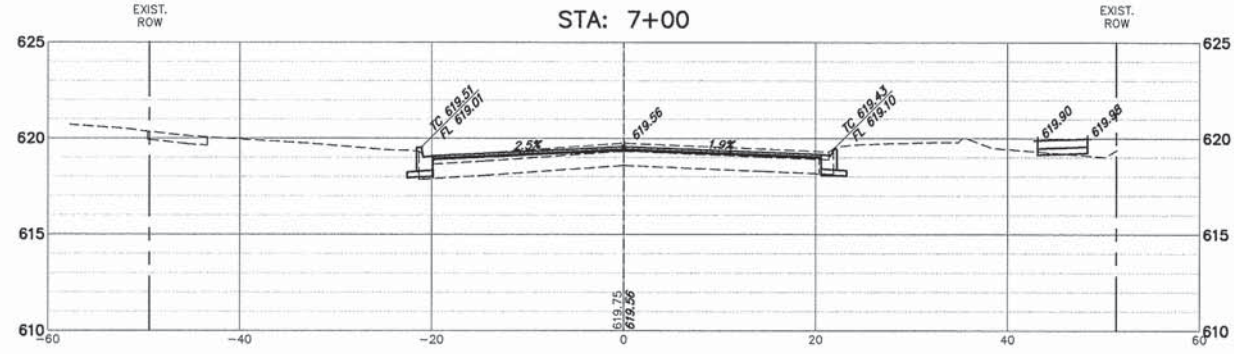
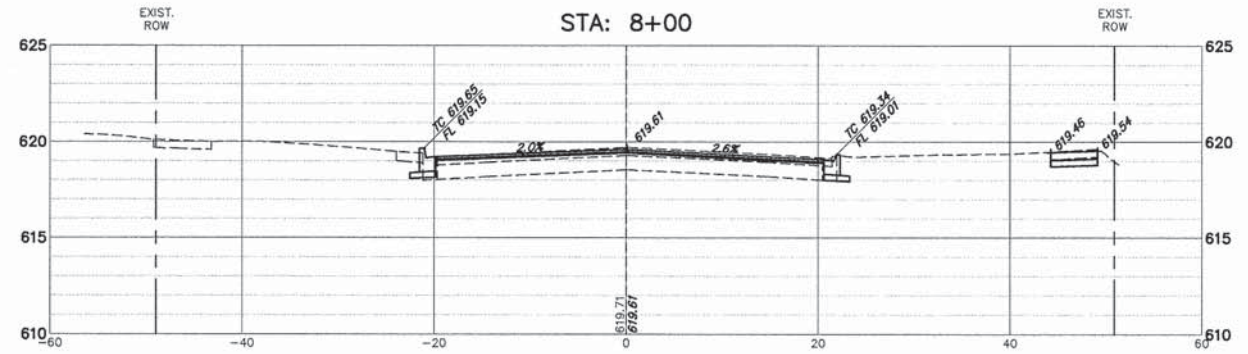
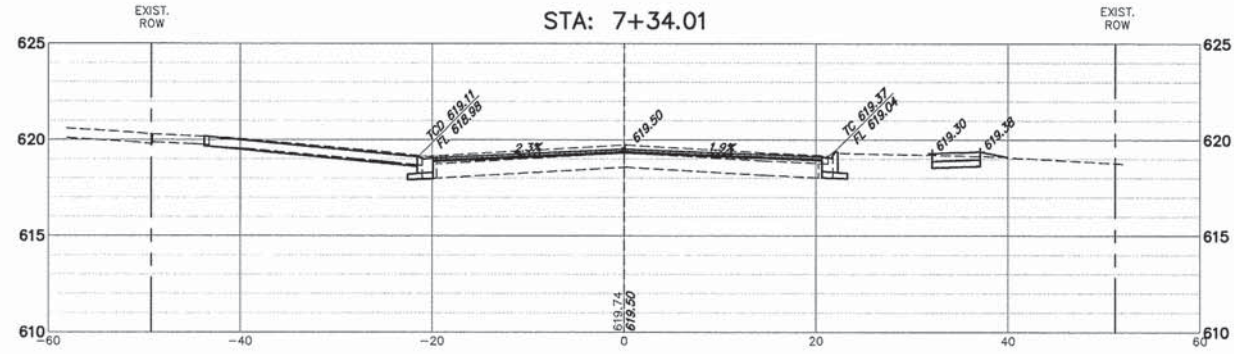
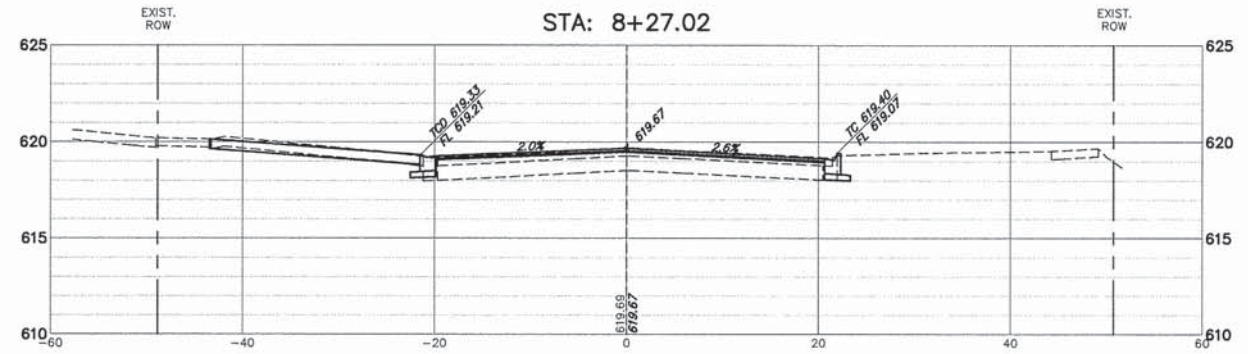
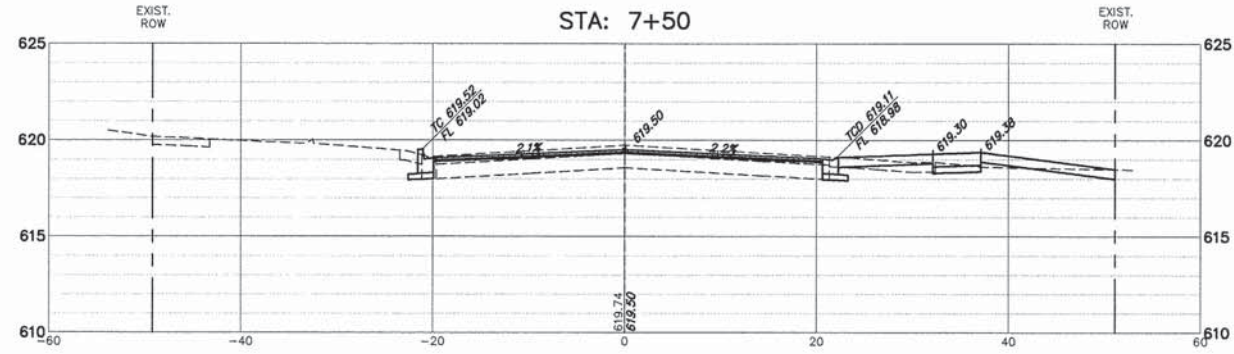
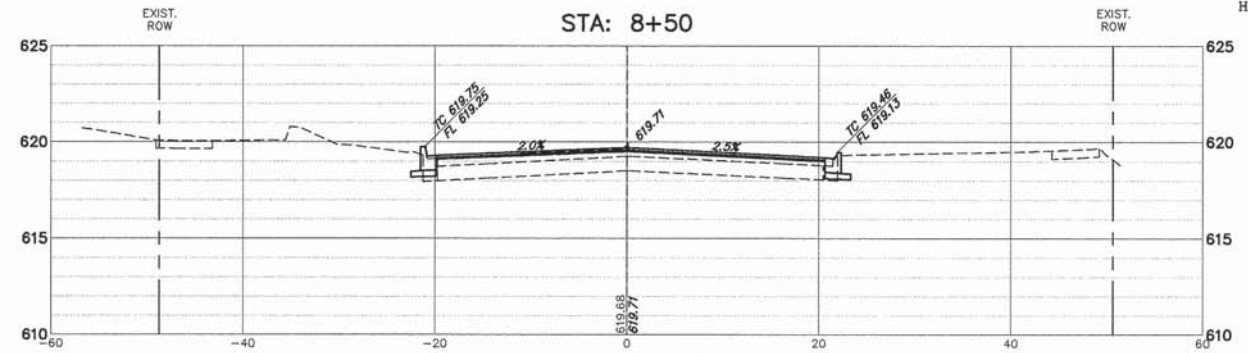
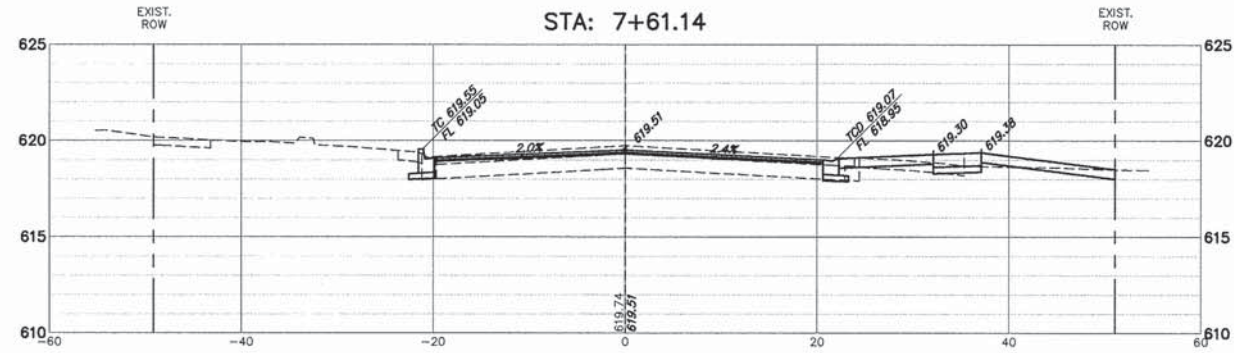
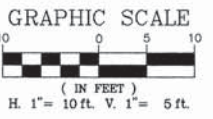
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 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

REVISED - -
 REVISED - -
 REVISED - -
 REVISED - -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE CROSS SECTIONS
 INTERSECTION AND SIGNAL IMPROVEMENTS**
 SCALE: 1"=20' SHEET NO. - OF - SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	38
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



CHA GEVAULT HAMILTON ASSOCIATES, INC. 850 Forest Edge Drive, Vernon Hills, IL 60061, PH: (847) 439-2000, FAX: (847) 439-2003

FILE NAME = 9232.407 PR-1.dwg

USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=10'
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

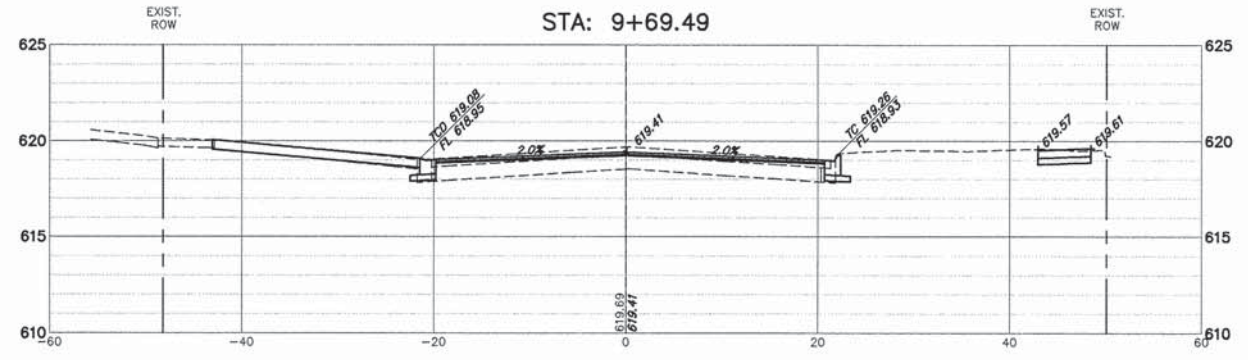
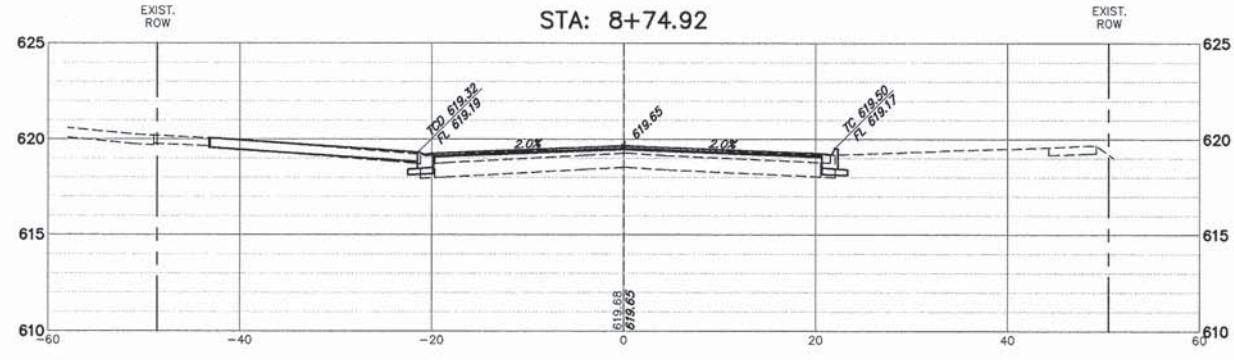
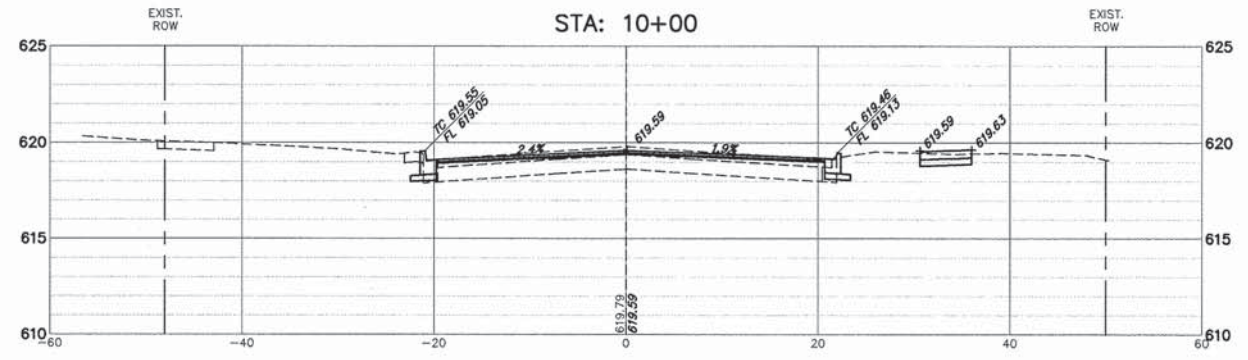
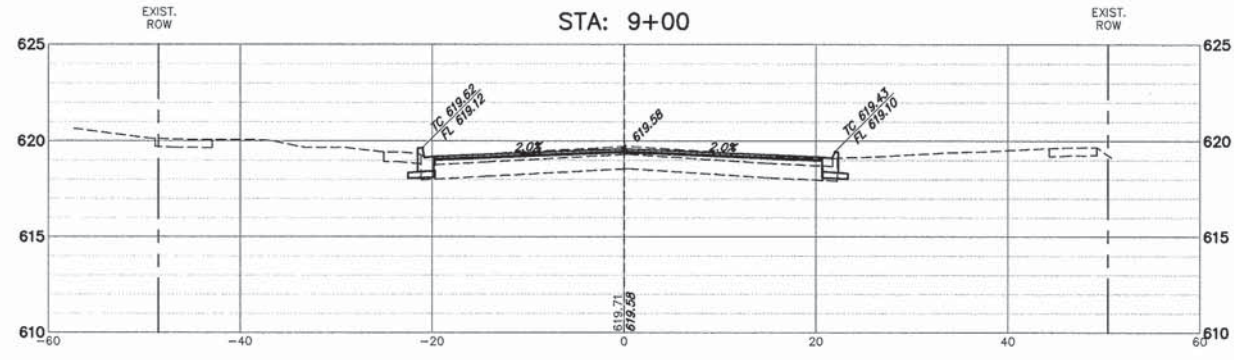
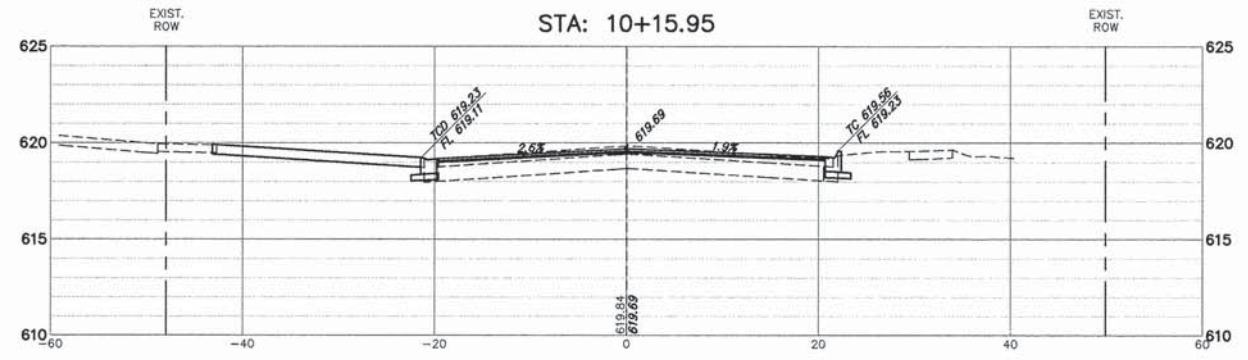
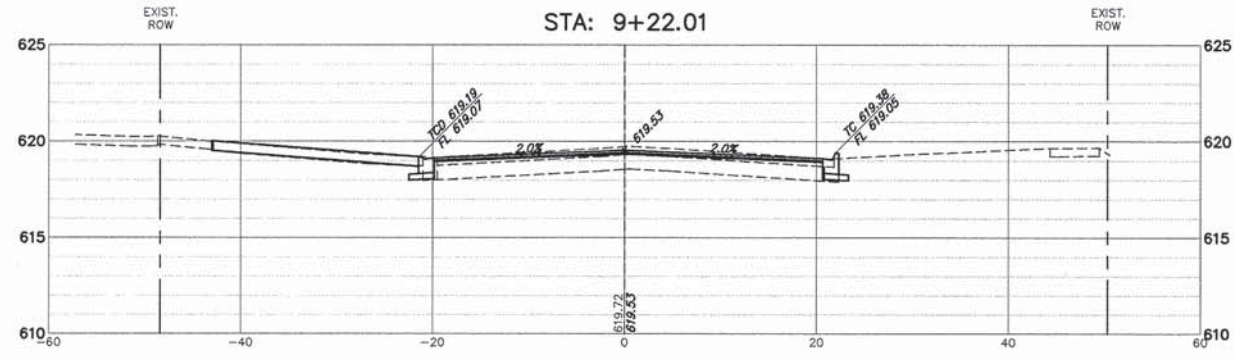
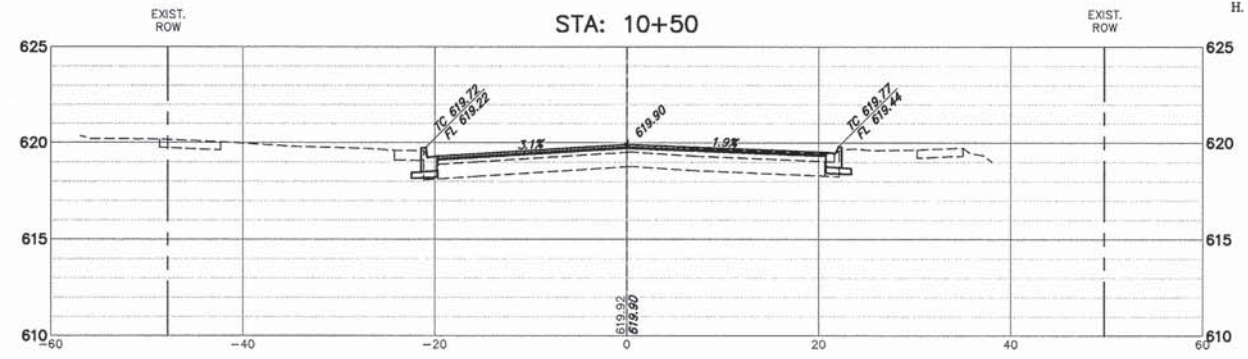
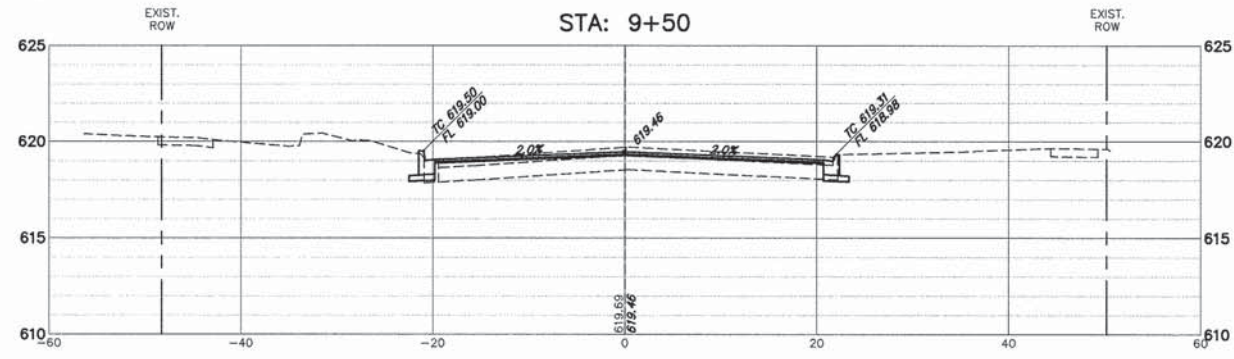
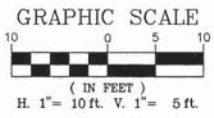
REVISED - -
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE CROSS SECTIONS
 INTERSECTION AND SIGNAL IMPROVEMENTS**

SCALE 1"=20' SHEET NO. - OF - SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	39
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				



CHA GEWALT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 Pkx. (847) 438-0700
 Fkx. (847) 438-0700

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=10'
 PLOT DATE = 1/31/14

DESIGNED - BJW
 DRAWN - ZCW
 CHECKED - SDB
 DATE - 1/31/14

REVISED - -
 REVISED - -
 REVISED - -
 REVISED - -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE CROSS SECTIONS
 INTERSECTION AND SIGNAL IMPROVEMENTS**

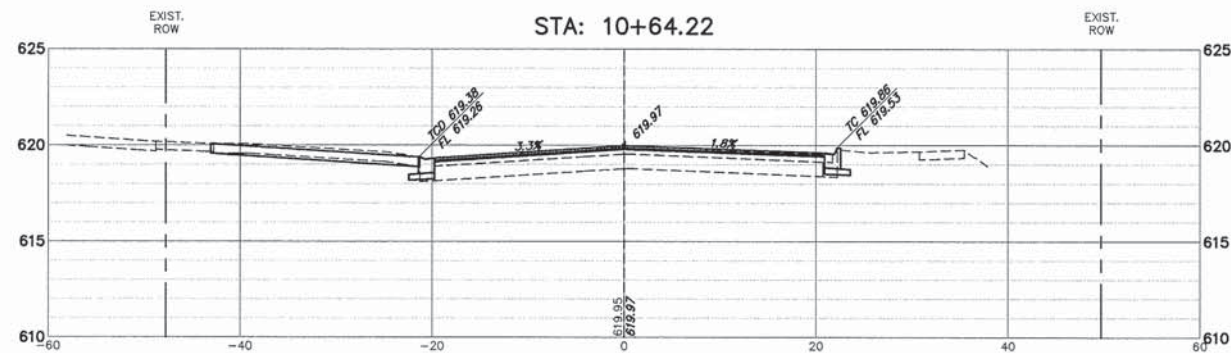
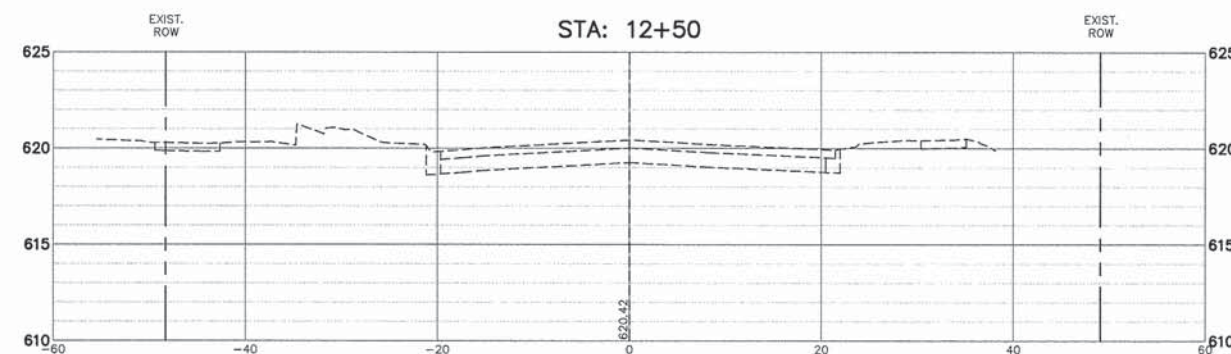
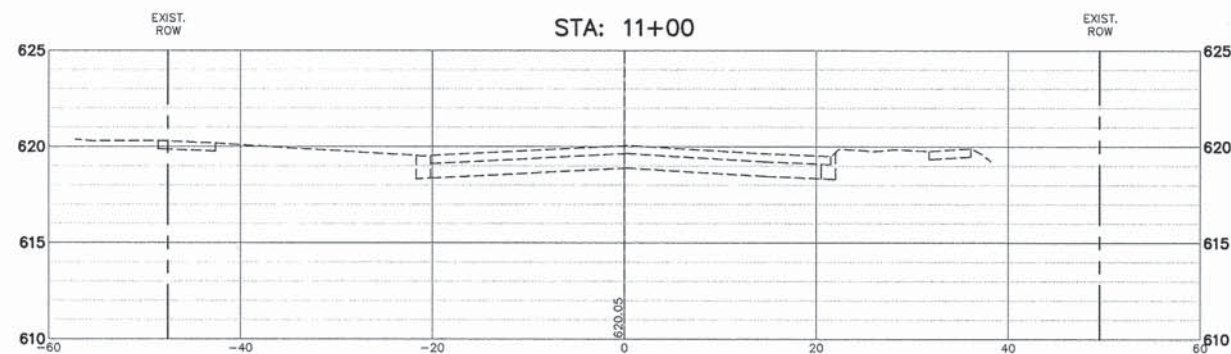
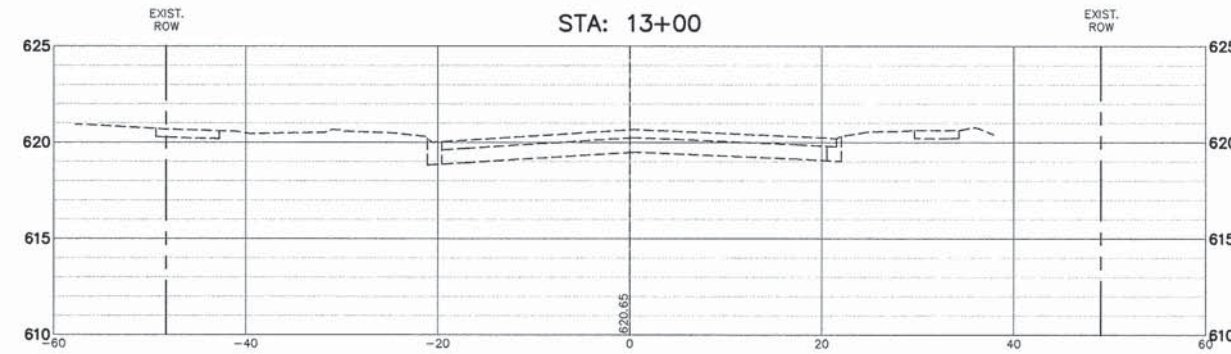
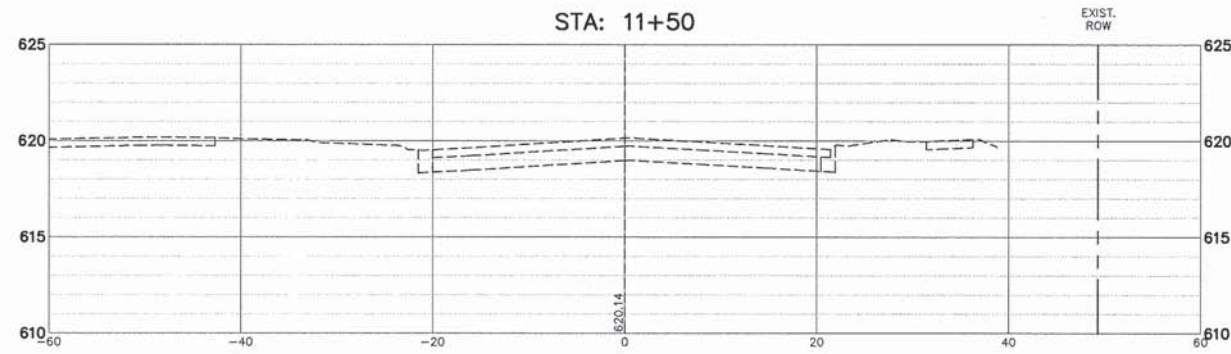
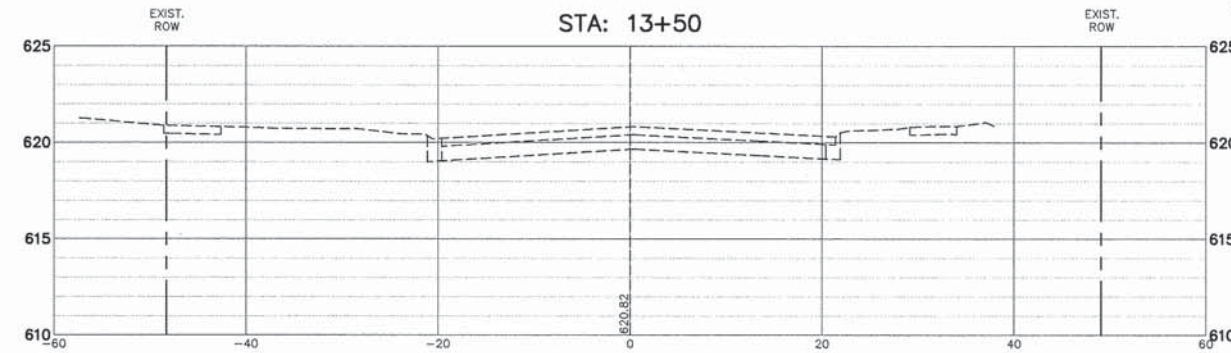
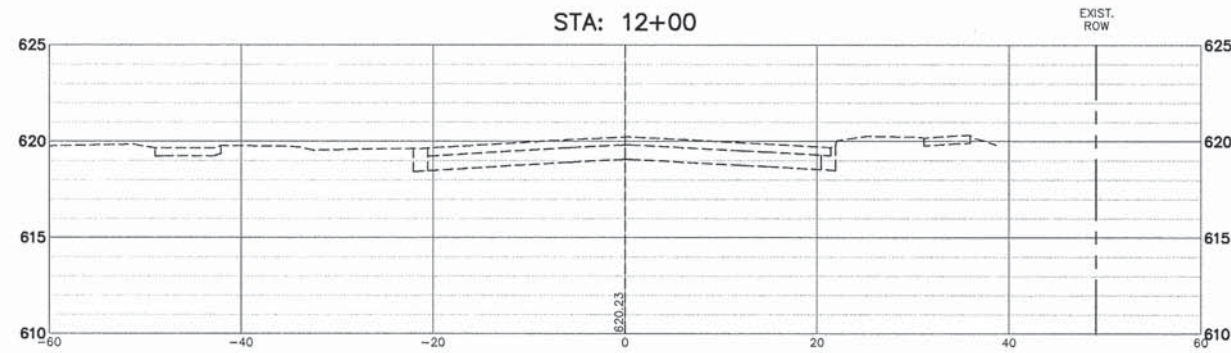
SCALE: 1"=20' SHEET NO. - OF - SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	40
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				

GRAPHIC SCALE



(IN FEET)
H. 1" = 10 ft. V. 1" = 5 ft.



CHA GEVAULT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 PH: (847) 482-2700
 FAX: (847) 482-2701

FILE NAME = 9232.407 PR-1.dwg
 USER NAME = BRIAN WESOLOWSKI
 PLOT SCALE = 1"=10'
 PLOT DATE = 1/31/14

DESIGNED - BJW	REVISED - -
DRAWN - ZCW	REVISED - -
CHECKED - SDB	REVISED - -
DATE - 1/31/14	REVISED - 18

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CENTRAL AVENUE CROSS SECTIONS
INTERSECTION AND SIGNAL IMPROVEMENTS**

SCALE 1"=20' SHEET NO. - OF - SHEETS STA. TO STA.

FAU RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2798	12-00058-00-TL	COOK	41	41
CONTRACT #:			61A27	
ILLINOIS FED. AID PROJECT				