

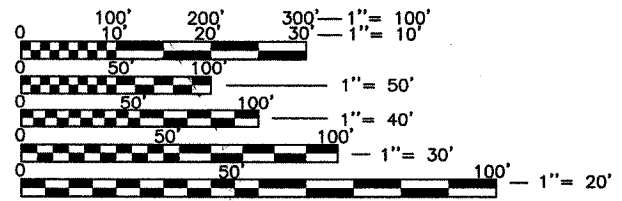
F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHTS.
120	00-00097-00-CH	MCHENRY	28
COVER SHEET			
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F-0305			

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	SUMMARY OF QUANTITIES
4	TYPICAL SECTIONS
5	ALIGNMENT AND TIE POINTS
6-7	PLAN & PROFILE
8-11	DISTRICT ONE TRAFFIC SIGNAL DETAILS
12	TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN
13	TEMPORARY TRAFFIC SIGNAL CABLE PLAN
14	TRAFFIC SIGNAL MODERNIZATION PLAN
15	TRAFFIC SIGNAL CABLE PLAN
16	INTERCONNECT SCHEMATIC
17	TRAFFIC SIGNAL SYSTEM INTERCONNECT MODERNIZATION
18	PAVEMENT MARKING PLAN
19-20	SPECIAL DETAILS
21-24	CROSS SECTIONS
25-28	STANDARD DETAILS

STATE STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
424001-04	CURB RAMPS FOR SIDEWALKS
602001	CATCH BASIN, TYPE A
602301	INLET, TYPE A
602401	MANHOLE, TYPE A
602501	VALVE VAULT, TYPE A
602601	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
604001-02	FRAME AND LIDS, TYPE I
604051-01	FRAME AND GRATE, TYPE II
604091-01	FRAME AND GRATE, TYPE 24
606001-02	CONCRETE CURB, TYPE B, AND COMBINATION CONCRETE CURB AND GUTTER
701301-02	LANE CLOSURE 2L, 2W, SHORT TIME OPERATIONS
701501-03	701SURBAN LANE CLOSURE 2L, 2W, UNDIVIDED
701502-01	URBAN LANE CLOSURE 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701606-04	URBAN LANE CLOSURE MULTILANE, 2W, WITH MOUNTABLE MEDIAN
701701-04	URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-03	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
702001-05	TRAFFIC CONTROL DEVICES
720001	SIGN PANEL MOUNTING DETAILS
720006	SIGN PANEL ERECTION DETAILS
720016-01	MAST ARM MOUNTED STREET NAME
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
805001	ELECTRICAL SERVICE INSTALLATION DETAILS
814001	CONCRETE HANDHOLES
814006	DOUBLE HANDHOLES
857001	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
877001-02	STEEL MAST ARM ASSEMBLY AND POLE
878001-03	CONCRETE FOUNDATION DETAILS
880001	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006	TRAFFIC SIGNAL MOUNTING DETAILS
886001	DETECTOR LOOP INSTALLATIONS
886006	TYPICAL LAYOUT FOR DETECTION LOOPS



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.

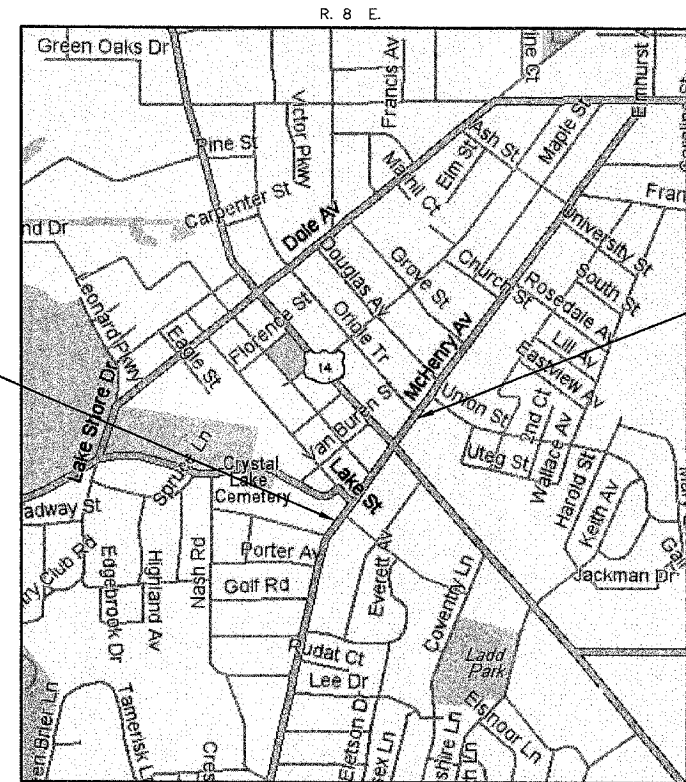
CONTRACT NO. **83725**
DESIGN DESIGNATION: FAU RTE 120 MCHENRY AVE.
1570 (03) MINOR ARTERIAL 1.62 (FD-20)
DESIGN SPEED 35 MPH

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
F.A.U. ROUTE NO. 120 (MCHENRY AVENUE)
AT F.A.P. ROUTE 305 (U.S. ROUTE 14)
SECTION NO. 00-00097-00-CH
PROJECT NO. M-8003(331)**

CITY OF CRYSTAL LAKE

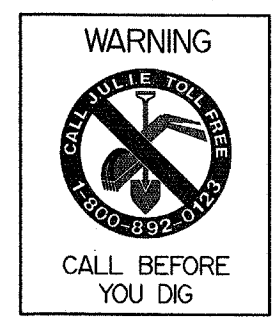
**McHENRY COUNTY
JOB NO. C-91-303-02**



McHENRY AVENUE
IMPROVEMENT BEGINS
STATION 43+40

McHENRY AVENUE
IMPROVEMENT ENDS
STATION 63+68

STATION EQUATION
STA. 50+00 BACK MCHENRY AVE. =
STA. 60+01.23 AHEAD MCHENRY AVE.



LOCATION MAP
SCALE: 1" = 2000'

NET LENGTH OF IMPROVEMENT MCHENRY AVENUE = 1026.77 LIN. FT. = (0.1945 MILES)

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

APPROVED 18 November 2003
Deyle F. Wakefield LOCAL AGENCY OFFICIAL

PASSED 2/19 2004
John P. Ko/AP DISTRICT ENGINEER OF LOCAL ROADS AND STREETS

APPROVED February 19, 2004
John P. Ko/AP DISTRICT ENGINEER

DATE: 11/18/03

BY: James R. Lenzini
JAMES R. LENZINI

LICENSE EXPIRES: 11/30/05

LICENSE NO. 062-043174

HLR

Account Number 07-10-0134

Hampton Lenzini and Renwick, Inc.
Civil Engineers
Land Surveyors
380 Shepard Drive
Elgin, Illinois 60123-7
847.697.6700

MAZHAR KHAN 847-705-4179
FEDERAL AID ENGINEER
HAMPTON LENZINI AND RENWICK, INC.

GENERAL NOTES

SPECIFICATIONS, STANDARDS, AND SPECIAL PROVISIONS

ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED JANUARY 1, 2002 (HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS," ADOPTED JANUARY 1, 2004; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS", FIFTH EDITION; THE DETAILS IN THE PLANS; AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH ARTICLE 107.14 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL AT ALL TIMES PROVIDE PROTECTION FOR TRAFFIC AS CALLED FOR IN THE APPLICATION OF TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS AND THE PLANS.

UTILITIES

THE CONTRACTOR SHALL COOPERATE WITH THE CITY IF ANY UTILITY IMPROVEMENTS ARE REQUIRED BY THE CITY WITHIN THE DURATION OF THE CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT, OR PROTECTION IS NECESSARY.

THE LOCATION OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, WATER MAINS, SANITARY SEWERS, AND ANY OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN ON THE PLANS IS APPROXIMATE, AND THEIR EXACT LOCATION IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

COORDINATION OF ALL UTILITY WORK INVOLVED IN THE CONSTRUCTION AREA WILL BE DISCUSSED AT A PRECONSTRUCTION CONFERENCE.

STAKING

THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS, PROPERTY CORNERS, AND REFERENCE MARKERS UNTIL THE OWNER, HIS AGENT, OR AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATIONS.

ALL RADII FOR PROPOSED CURB AND GUTTER ARE TO THE BACK OF CURB, UNLESS OTHERWISE NOTED. CURB AND GUTTER ELEVATIONS SHOWN AT POINTS OF CURVE, ETC., ARE TOP OF CURB, UNLESS OTHERWISE NOTED.

STRUCTURE OFFSET LOCATIONS GIVEN ON THE DETAILED PLANS ARE TO THE FOLLOWING POINTS: A) FOR STRUCTURES FALLING IN THE CURB LINE--TO THE BACK OF CURB; B) FOR ALL OTHER STRUCTURES--TO THE CENTER OF THE STRUCTURE.

ALL ELEVATIONS ARE ON U.S.G.S. DATUM.

ALL OFFSET LOCATIONS GIVEN ON THE DETAILED PLANS FOR STRUCTURES, BACKS OF CURB, ETC. ARE FROM THE CENTERLINE AS SHOWN ON THE PLANS.

STORM SEWER AND WATER MAIN

ANY LOOSE MATERIAL DEPOSITED IN THE FLOW LINE OF DRAINAGE STRUCTURES WHICH OBSTRUCTS THE NATURAL FLOW OF WATER SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. PRIOR TO ACCEPTANCE OF THE IMPROVEMENT, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN IN AN OPERATING CONDITION TEMPORARY OUTLETS AND CONNECTIONS FOR ALL DRAINS, SEWERS, AND CATCH BASINS. THE CONTRACTOR SHALL PROVIDE FACILITIES WHICH HAVE THE CAPACITY TO RECEIVE AND DISCHARGE THE STORM WATER FLOW RATES NORMALLY ACCEPTED AND RELEASED BY EXISTING DRAINAGE FACILITIES. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

THE COST OF INTERCONNECTIONS BETWEEN THE PROPOSED AND EXISTING SEWER SYSTEMS AND PROPOSED AND EXISTING WATER MAIN SYSTEMS SHALL BE INCLUDED IN THE VARIOUS UNIT PRICES OF THE PROPOSED SYSTEM.

ALL FRAMES, GRATES, LIDS, AND BOXES SCHEDULED TO BE REMOVED FROM EXISTING STRUCTURES SHALL REMAIN THE PROPERTY OF THE CITY. ANY ITEMS DAMAGED DURING REMOVAL SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE. THE COST OF SALVAGING EXISTING FRAMES, GRATES, LIDS, OR BOXES AND/OR STOCKPILING THEM ON THE JOB SITE FOR PICK-UP BY THE CITY OR DELIVERY TO THE CITY MAINTENANCE YARD SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

ALL FRAMES WITH CLOSED LIDS TO BE FURNISHED AS PART OF THIS CONTRACT SHALL HAVE CAST INTO THE LID ONE OF THE FOLLOWING WORDS: FOR STORM SEWER STRUCTURES--"STORM". FOR SANITARY SEWER STRUCTURES--"SANITARY". FOR WATER SYSTEM STRUCTURES--"WATER". ANY ADDITIONAL COST FOR THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

FRAME ELEVATIONS GIVEN ON THE PLANS ARE ONLY TO ASSIST THE CONTRACTOR IN DETERMINING THE APPROXIMATE OVERALL HEIGHT OF THE STRUCTURE. FRAMES ON ALL STRUCTURES WILL BE ADJUSTED TO THE FINAL ELEVATION AND CROSS SLOPE OF THE AREA IN WHICH THEY ARE LOCATED.

ALL STORM SEWERS SHALL BE RCCP, CLASS IV, UNLESS NOTED OTHERWISE ON THE PLAN.

WATER MAIN SHALL HAVE A MINIMUM COVER OF SIX (6) FEET.

BACKFILL

STORM SEWER, WATER MAIN, AND SANITARY SEWER SHALL BE BACKFILLED IN ACCORDANCE WITH ARTICLE 550.07, METHOD 1 ONLY, OR AS DIRECTED BY THE ENGINEER.

ALL TRENCH BACKFILL QUANTITIES FOR STORM AND SANITARY SEWER AND WATER MAIN HAVE BEEN COMPUTED AND SHALL BE PAID FOR IN ACCORDANCE WITH THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, BUREAU OF CONSTRUCTION TRENCH BACKFILL TABLE. ANY TRENCH BACKFILL REQUIRED IN EXCESS OF THE QUANTITY ESTABLISHED ABOVE, INCLUDING BEDDING MATERIAL, SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

ALL TRENCH BACKFILL SHALL BE CRUSHED CA 6 AGGREGATE.

P.C. CONCRETE

TYPE "A" SIDEWALK RAMPS FOR THE HANDICAPPED SHALL BE INSTALLED AT ALL INTERSECTING STREETS AND DRIVEWAYS PER CURRENT IDOT STANDARDS AT LOCATIONS WHERE SIDEWALK IS SHOWN ON PLAN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING FRESH CONCRETE FROM DAMAGE AND VANDALISM. ANY DAMAGED OR VANDALIZED CONCRETE SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

CONTAMINATED SOILS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING AN ENVIRONMENTAL FIRM WITH AS LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK (LUST) CLEANUPS OR THAT IS PREQUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE ANY SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

THE FOLLOWING AREAS SHOULD BE MONITORED BY THE ENVIRONMENTAL FIRM FOR SOIL CONTAMINATION AND WORKERS PROTECTION.

1. STATION 49+45 TO STATION 49+80 +/- 0 TO 50 FEET LT (RON'S SERVICE - 351 WEST VIRGINIA STREET). CONTAMINANTS OF CONCERN SAMPLING PARAMETERS: BETX, PNAs, AND TCLP LEAD.

ALL UTILITY COMPANIES RELOCATING WITHIN THE FOLLOWING AREAS SHOULD BE NOTIFIED OF THE POTENTIAL SOIL CONTAMINATION.

1. STATION 49+45 TO STATION 49+80 +/- 0 TO 50 FEET LT (RON'S SERVICE - 351 WEST VIRGINIA STREET). CONTAMINANTS OF CONCERN SAMPLING PARAMETERS: BETX, PNAs, AND TCLP LEAD.

ANY WASTE GENERATED AS A SPECIAL WASTE FROM THIS PROJECT SHOULD BE MANIFESTED OFF-SITE USING THE GENERATOR NUMBER ASSOCIATED WITH McHENRY COUNTY. THE GENERATOR NUMBER FOR McHENRY COUNTY IS 1118995010.

MISCELLANEOUS

THE CONTRACTOR SHALL MAINTAIN EXISTING SIDE STREET ACCESS, EXISTING DRIVEWAY ACCESS, AND PEDESTRIAN ACCESS TO ADJUTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT. THIS ITEM SHALL BE INCLUDED IN THE ITEM "AGGREGATE FOR TEMPORARY ACCESS".

SAWING OF REMOVAL ITEMS AS NOTED ON THE PLANS, SPECIFIED IN THE STANDARD SPECIFICATIONS, OR AS REQUIRED BY THE ENGINEER SHALL BE INCLUDED IN THE COST OF THE ITEM BEING REMOVED.

AT ALL BUTT JOINT LOCATIONS, THE EXISTING SURFACE SHALL BE CUT TO A MINIMUM THICKNESS OF TWO (2) INCHES.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS CONTRACT.

WHERE NEW WORK MEETS EXISTING FEATURES TO REMAIN, FIELD CHECK ALL DIMENSIONS AND ELEVATIONS BEFORE PROCEEDING WITH CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

THE CONTRACTOR WILL BE REQUIRED TO COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. THE CONTRACTOR IS PROHIBITED FROM BURNING ANY MATERIAL WITHIN OR ADJACENT TO THE IMPROVEMENT.

ALL DISTURBED AREAS WITHIN THE PROJECT THAT ARE NOT OTHERWISE SURFACED SHALL BE SODDED. SOD LIMITS SHOWN ON THE PLANS ARE THE MAXIMUM PAY WIDTHS FOR PAYMENT PURPOSES.

ALL TYPE I AND II BARRICADES SHALL BE WEIGHTED DOWN WITH TWO SANDBAGS EACH.

THE CONTRACTOR SHALL PREPARE THE SUBGRADE IN ACCORDANCE WITH ARTICLE 301.03 OF THE STANDARD SPECIFICATIONS PRIOR TO THE REMOVAL OF ANY UNSTABLE MATERIALS.

FERTILIZER NUTRIENTS

USE A FERTILIZER WITH AN ANALYSIS OF 1:1:1 RATIO AT THE FOLLOWING RATE PER ACRE:

NITROGEN FERTILIZER NUTRIENT	60 LBS.
PHOSPHORUS FERTILIZER NUTRIENT	60 LBS.
POTASSIUM FERTILIZER NUTRIENT	60 LBS.

THE CONTRACTOR WILL BE REQUIRED TO RELOCATE OR REMOVE AND REPLACE SIGNS WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS AND TO TEMPORARILY RESET ALL SUCH SIGNS DURING CONSTRUCTION OPERATIONS. THIS WORK WILL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

ALL WORK INVOLVING SIGNS SHALL BE GOVERNED BY THE FOLLOWING REQUIREMENTS:

1. SIGNS SHALL NOT BE MOVED UNTIL PROGRESS OF WORK NECESSITATES IT.
2. EVERY SIGN REMOVED MUST BE RE-ERECTED AT A TEMPORARY LOCATION IN A WORKMANLIKE MANNER AND BE VISIBLE TO TRAFFIC FOR WHICH IT IS INTENDED. ALL SUCH SIGNS MUST BE MAINTAINED STRAIGHT AND CLEAN FOR THE DURATION OF THE TEMPORARY SETTING.
3. ALL SIGNS SHALL BE RE-ERECTED IN PERMANENT LOCATIONS AS THE ROADWAY IS COMPLETED. HORIZONTAL LOCATIONS FROM THE EDGE OF PAVEMENT SHALL BE AS DESIGNATED BY THE ENGINEER.
4. ALL UNUSED SIGNS WILL BE RETURNED TO THE CITY, COUNTY OR STATE, AS APPLICABLE.
5. LONGER POSTS MAY BE REQUIRED AT SOME TEMPORARY OR PERMANENT SIGN LOCATIONS TO MAINTAIN PROPER SIGN ELEVATIONS.

THE CONTRACTOR WILL BE REQUIRED TO TEMPORARILY RESET ALL EXISTING MAILBOXES WHICH INTERFERE WITH HIS CONSTRUCTION OPERATIONS, AND AFTER COMPLETION OF ROADWAY CONSTRUCTION, TO SET THEM IN THEIR PERMANENT LOCATIONS AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE IN CONFORMANCE WITH ARTICLE 107.20 OF THE STANDARD SPECIFICATIONS, AND THE COST WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

BITUMINOUS MIXTURE REQUIREMENT			
ITEM	AC TYPE	VOIDS	MAX % RAP
INCIDENTAL BITUMINOUS SURFACING	PG 64-22	4% @ 70 Gyr.	15
STABILIZED PAVEMENT	PG 64-22	4% @ 50 Gyr.	15
BITUMINOUS BASE COURSE, SUPERPAVE	PG 58-22	2% @ 50 Gyr.	50
LEVELING BINDER (MACHINE METHOD), SUPERPAVE, N70	PG 64-22	4% @ 70 Gyr.	10
BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE IL 19, N70	PG 64-22	4% @ 70 Gyr.	15
BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX D, N70	PG 64-22	4% @ 70 Gyr.	10

PAVEMENT DESIGN

McHENRY AVENUE
CLASS II 80,000 lb.
FULL-DEPTH BITUMINOUS CONCRETE PAVEMENT

2013 ADT	21,940	
PV	21,062	96%
SU	658	3%
MU	220	1%

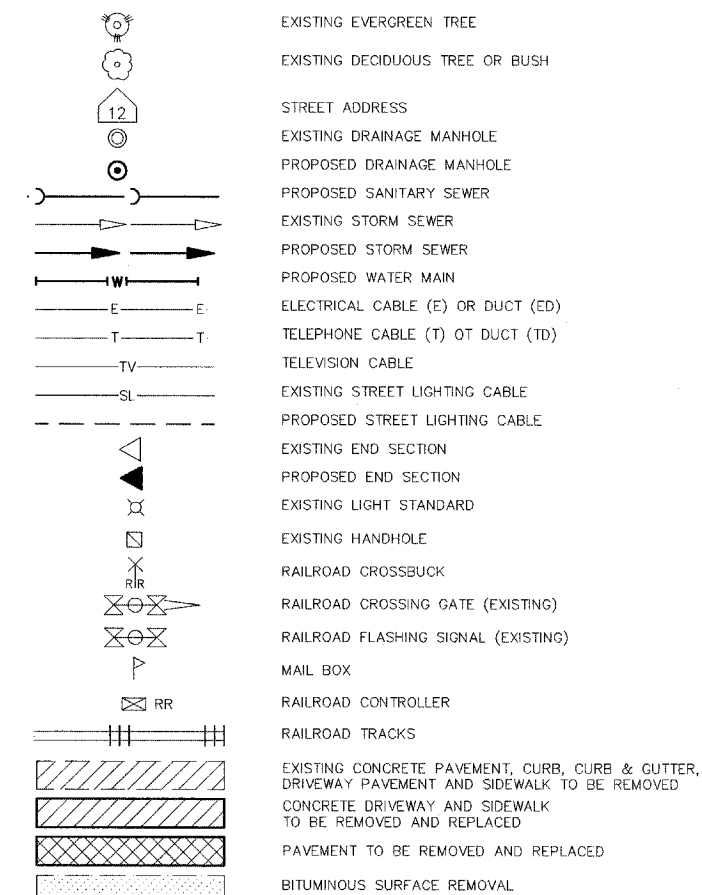
DP=20 AC20 (PG 64-22) 76'
IF=1.62 EAC=650
SSR=POOR MINIMUM THICKNESS REQUIRED=10"
AC MICROSTRAIN=90 THICKNESS PROVIDED=11"
12" AGGREGATE SUBGRADE

F.A.U. SECTION	COUNTY	TOTAL SHEET
ROUTE 00-00097-00-CH	McHENRY	28
120 STATE SECTION		2

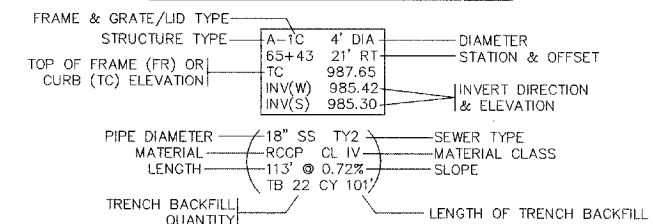
GENERAL NOTES AND LEGEND
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F-0305(023)

83725

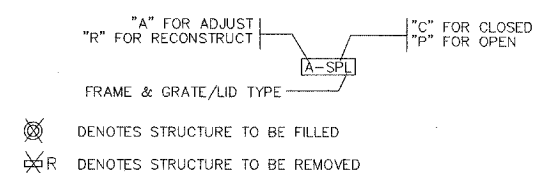
SUPPLEMENTAL LEGEND



SEWER STRUCTURE AND PIPE NOTATION



STRUCTURE ADJUSTMENT/RECONSTRUCTION/REMOVAL NOTATION



SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODES	
			1000-1A QUANTITY	Y031-1F QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	18	
20200100	EARTH EXCAVATION	CU YD	417	
20800150	TRENCH BACKFILL	CU YD	13	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	175	
21301072	EXPLORATION TRENCH 72" DEPTH	FOOT	50	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	2	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	2	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	2	
25200110	SODDING, SALT TOLERANT	SQ YD	175	
25200200	SUPPLEMENTAL WATERING	UNIT	2	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	3	
40600300	AGGREGATE (PRIME COAT)	TON	28	
42101300	PROTECTIVE COAT	SQ YD	949	
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	218	
42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5 INCH	SQ FT	3694	
42400440	PORTLAND CEMENT CONCRETE SIDEWALK, 6 INCH, SPECIAL	SQ FT	748	
42400500	DETECTABLE WARNING	SQ FT	65	
44000030	BITUMINOUS SURFACE REMOVAL, (VARIABLE DEPTH)	SQ YD	3229	
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	258	
44000300	CURB REMOVAL	FOOT	165	
44000500	COMBINATION CONCRETE CURB AND GUTTER REMOVAL	FOOT	922	
44000600	SIDEWALK REMOVAL	SQ FT	3807	
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	725	
58106300	ADJUSTING WATER MAIN, 6"	FOOT	50	
58200300	WATER SERVICE LINE, 1"	FOOT	30	
58201400	CORPORATION STOPS, 1"	EACH	1	
58300100	ADJUSTING SANITARY SEWERS, 8-INCH DIAMETER OR LESS	FOOT	50	
58300300	ADJUSTING WATER SERVICE LINES	FOOT	50	
58400100	FIRE HYDRANTS TO BE MOVED	EACH	1	
58500600	DOMESTIC WATER SERVICE BOXES TO BE ADJUSTED	EACH	4	
58500700	DOMESTIC WATER SERVICE BOXES TO BE REMOVED	EACH	1	
60202405	CATCH BASINS, TYPE A, 4'-DIAMETER	EACH	5	
60220200	MANHOLES, TYPE A, 4'-DIAMETER	EACH	1	
60250200	CATCH BASINS TO BE ADJUSTED	EACH	1	
60252800	CATCH BASINS TO BE RECONSTRUCTED	EACH	2	
60255500	MANHOLES TO BE ADJUSTED	EACH	3	

CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODES	
			1000-1A QUANTITY	Y031-1F QUANTITY
60265700	VALVE VAULTS TO BE ADJUSTED	EACH	2	
60266100	VALVE VAULTS TO BE RECONSTRUCTED	EACH	1	
60266600	VALVE BOXES TO BE ADJUSTED	EACH	2	
60404950	FRAMES AND GRATES, TYPE 24	EACH	3	
60405700	FRAMES AND GRATES, SPECIAL	EACH	3	
60405710	FRAMES AND GRATES, TYPE II, SPECIAL	EACH	1	
60406100	FRAMES AND LIDS, TYPE I, CLOSED LID	EACH	8	
60500050	REMOVING CATCH BASINS	EACH	1	
60500205	FILLING CATCH BASINS	EACH	1	
60600605	CONCRETE CURB, TYPE B	FOOT	16	
60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	722	
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	205	
68900200	NON-SPECIAL WASTE DISPOSAL	CU YD	5	
68900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	
68900510	BETX-PNAS SOIL ANALYSIS	EACH	2	
68900530	SOIL DISPOSAL ANALYSIS	EACH	1	
68900635	LEAD TCLP SOIL ANALYSIS	EACH	2	
6700100	MOBILIZATION	L SUM	1	
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1	
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	219	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	4894	
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	154	
72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	2	
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	219	
78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2380	
78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1901	
78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	275	
78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	94	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1843	
81000600	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	32	
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	48	
81001000	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10	
81018500	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	299	
81019000	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	198	
81400100	HANDHOLE	EACH	1	

CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODES	
			1000-1A QUANTITY	Y031-1F QUANTITY
81400300	DOUBLE HANDHOLE	EACH		1
81500200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT		90
84400105	RELOCATE EXISTING LIGHTING UNIT	EACH		1
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT		1087
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT		1738
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT		518
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT		1528
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14, 1 PAIR	FOOT		1503
87301705	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18, 3 PAIR	FOOT		4813
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT		122
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.	EACH		2
87800100	CONCRETE FOUNDATION, TYPE A	FOOT		8
87800200	CONCRETE FOUNDATION, TYPE D	FOOT		4
87800400	CONCRETE FOUNDATION, TYPE E, 30-INCH DIAMETER	FOOT		30
87900200	DRILL EXISTING HANDHOLE	EACH		2
88000170	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH		2
88000280	SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH		1
88000290	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH		3
88000470	SIGNAL HEAD, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH		1
88100200	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED	EACH		4
88200100	TRAFFIC SIGNAL BACKPLATE	EACH		5
88500100	INDUCTIVE LOOP DETECTOR	EACH		1
88600100	DETECTOR LOOP, TYPE 1	FOOT		849
87702890	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH		1
87702920	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH		1
88800100	PEDESTRIAN PUSHBUTTON	EACH		4
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH		1
89501100	RELOCATE EXISTING TRAFFIC SIGNAL CONTROLLER	EACH		1
89501400	RELOCATE EX. EMERGENCY VEHICLE PRIORITY SYS. DETECTOR UNIT	EACH		2
89502200	MODIFY EXISTING CONTROLLER	EACH		1
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT		9987
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH		1
89502380	REMOVE EXISTING HANDHOLE	EACH		3
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH		4
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT		92

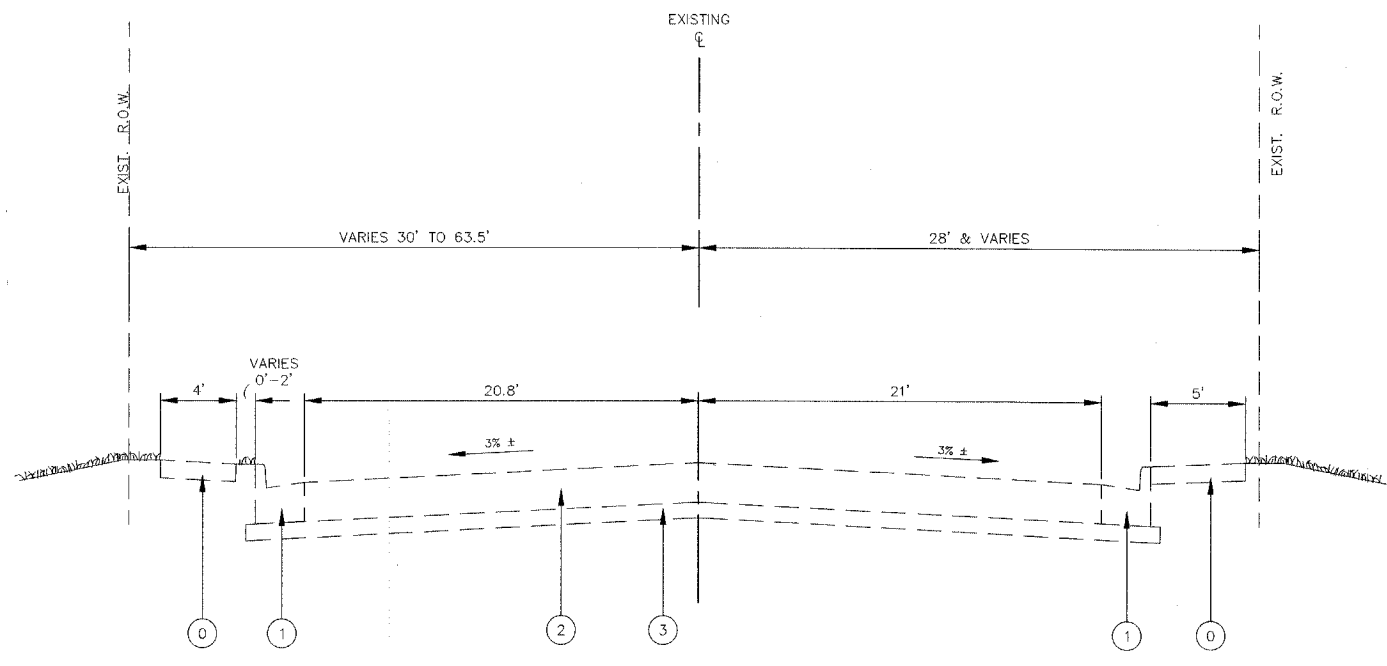
CODE NO.	ITEM	UNIT	CONSTRUCTION TYPE CODES	
			1000-1A QUANTITY	Y031-1F QUANTITY
K1005863	TREE ROOT PRUNING	EACH		2
X0301023	CONFIRMATION BEACON	EACH		
X3550400	BITUMINOUS BASE COURSE, SUPERPAVE, 7"	SQ YD		413
X4066426	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N70	TON		425
X4066616	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N70	TON		51
X4066770	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N70	TON		139
X4080020	INCIDENTAL BITUMINOUS SURFACING, SUPERPAVE, N50	TON		50
X4420132	CLASS D PATCHES, (SPECIAL)	SQ YD		15
X8050015	SERVICE INSTALLATION, POLE MOUNTED	EACH		
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING NO. 6, 1C	FOOT		
X8730350	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 20 3C, TWISTED, SHIELDED	FOOT		
XX000739	CURB STOP & BOX, 1"	EACH		1
XX002856	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM	L SUM		
XX005078	CATCH BASINS, TYPE C, 2'-DIAMETER	EACH		1
Z0000960	AGGREGATE FOR TEMPORARY ACCESS	TON		100
Z0001050	AGGREGATE SUBGRADE, 12"	SQ YD		702
XX005532	STABILIZED PAVEMENT SUPERPAVE, 11"	SQ YD		237

* NON PARTICIPATING ITEM - FUND TYPE 07C
 Δ SPECIALTY PAY ITEMS

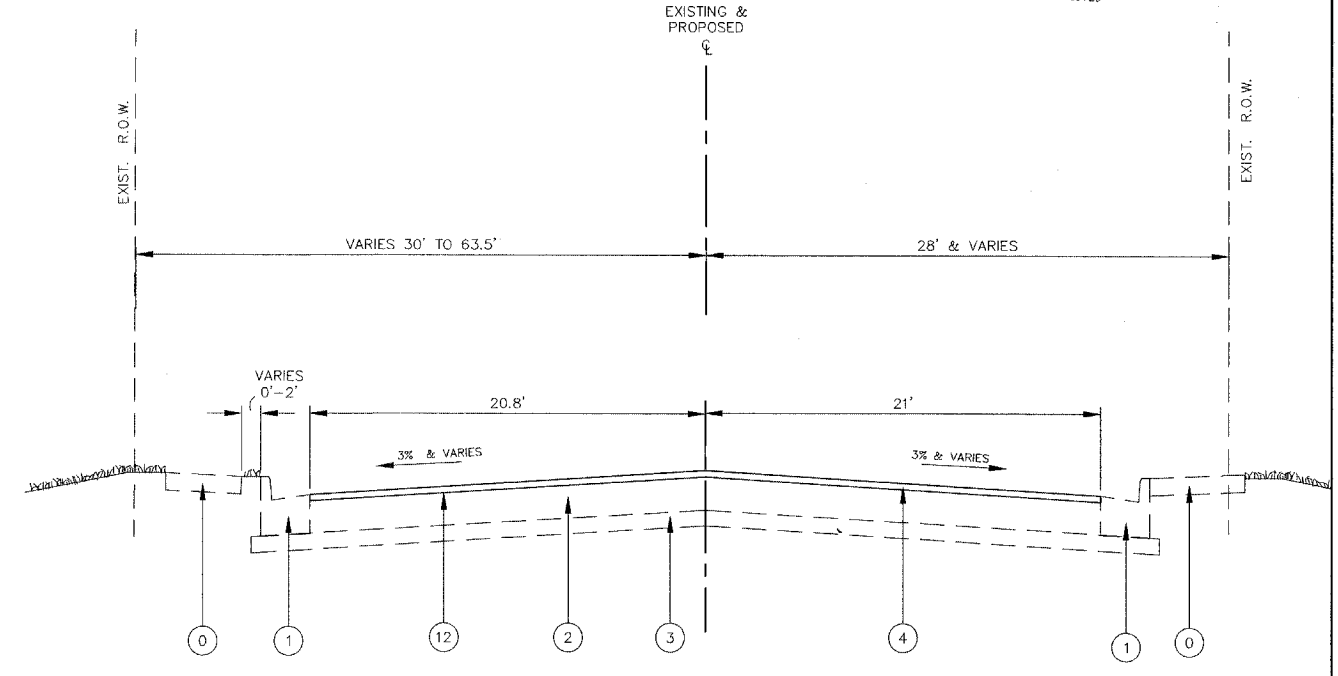
F.A.U.	SECTION	COUNTY	TOTAL SHEET
ROUTE 00-00097-00-CH		MCHENRY	28
120	STATE SECTION		4
TYPICAL SECTIONS			
F.H.W.A. REG. 5 ILLINOIS PROJECT NO. F-0305(023)			

83725

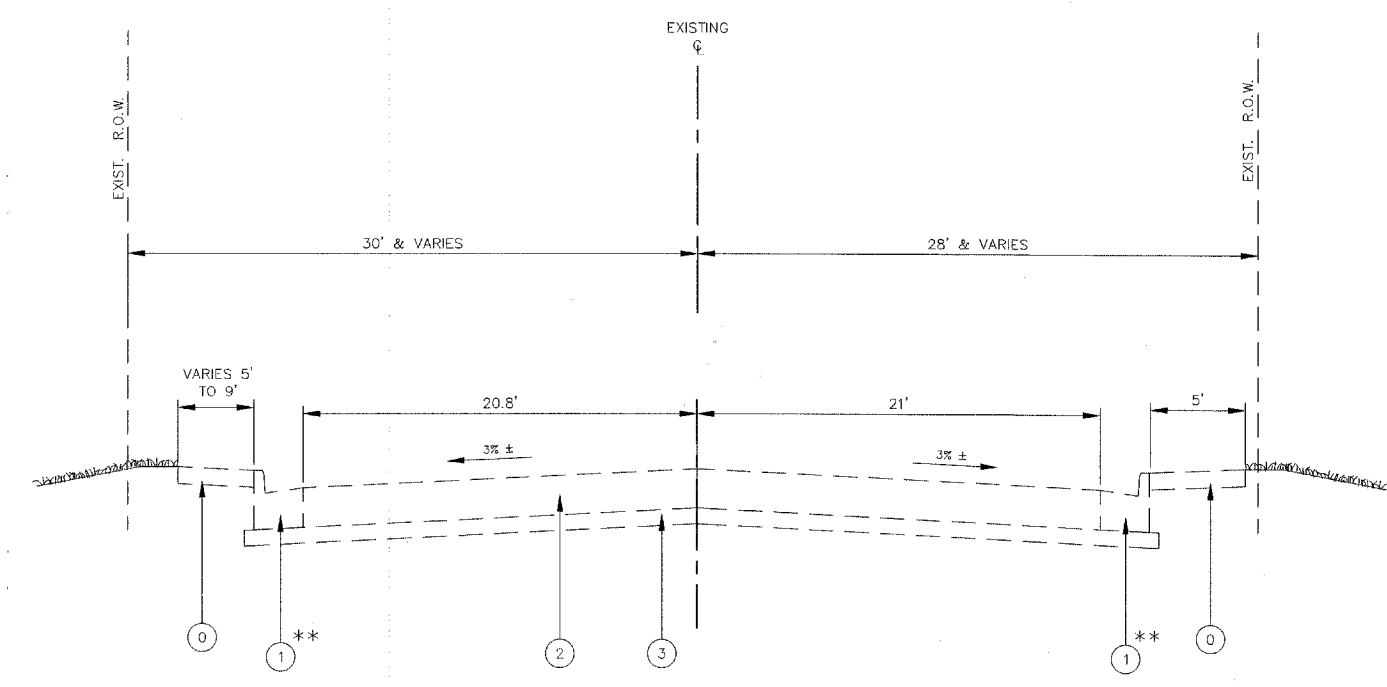
- 0 EXISTING CONCRETE SIDEWALK
- 1 EXISTING COMB. CONC. CURB & GUTTER, TYPE B-6.12/B-6.24 (SEE NOTE)
- 2 EXISTING BITUMINOUS CONCRETE PAVEMENT
- 3 EXISTING AGGREGATE SUBBASE
- 4 BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX D, N70, 2"
- 5 COMB. CONC. CURB & GUTTER, TYPE B-6.12
- 6 BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL 19, N70, 2"
- 7 BITUMINOUS BASE COURSE, SUPERPAVE, 7"
- 8 AGGREGATE SUBGRADE, 12"
- 9 PORTLAND CEMENT CONCRETE SIDEWALK, 5" WITH AGGREGATE BASE COURSE, TYPE B, 2"
- 10 STRIP REFLECTIVE CRACK CONTROL TREATMENT
- 11 LEVELING BINDER (MACHINE METHOD), SUPERPAVE, N70
- 12 BITUMINOUS SURFACE REMOVAL, (VARIABLE DEPTH)
- 13 TOPSOIL FURNISH AND PLACE, 4" AND SODDING SALT TOLERANT



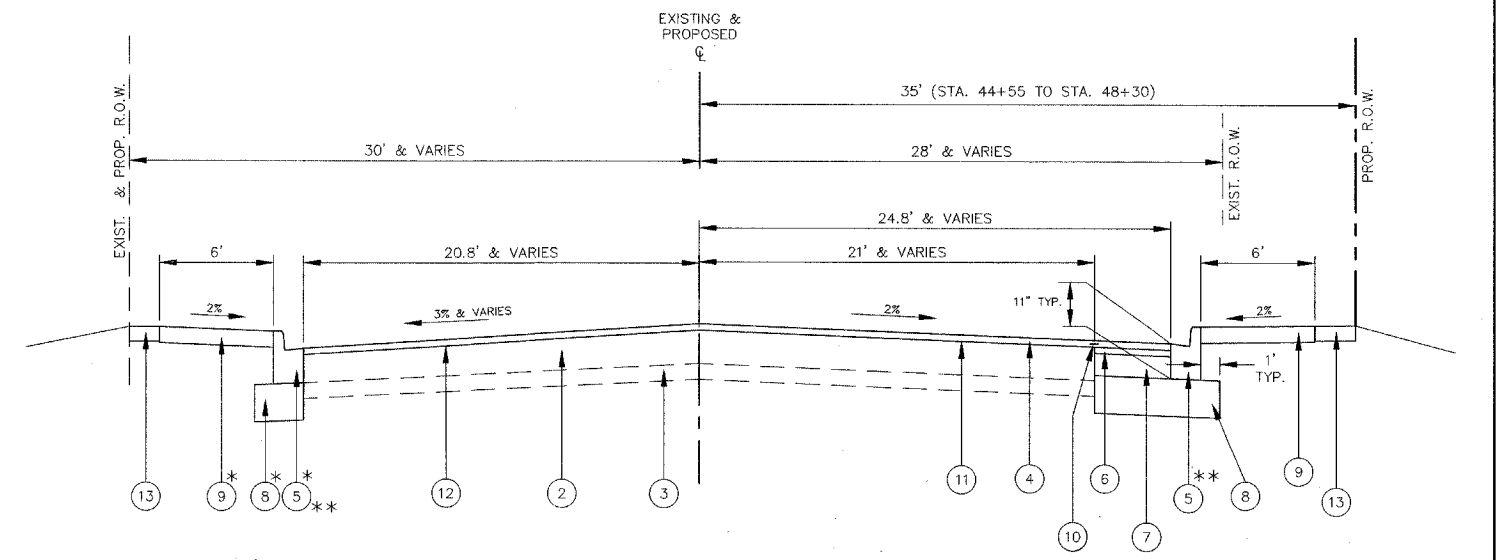
EXISTING TYPICAL SECTION
 McHENRY AVENUE
 STATION 43+40 TO STATION 46+55



PROPOSED TYPICAL SECTION
 McHENRY AVENUE
 STATION 43+40 TO STATION 44+55



EXISTING TYPICAL SECTION
 McHENRY AVENUE
 STATION 46+55 TO STATION 50+00



PROPOSED TYPICAL SECTION
 McHENRY AVENUE
 STATION 44+55 TO STATION 50+00

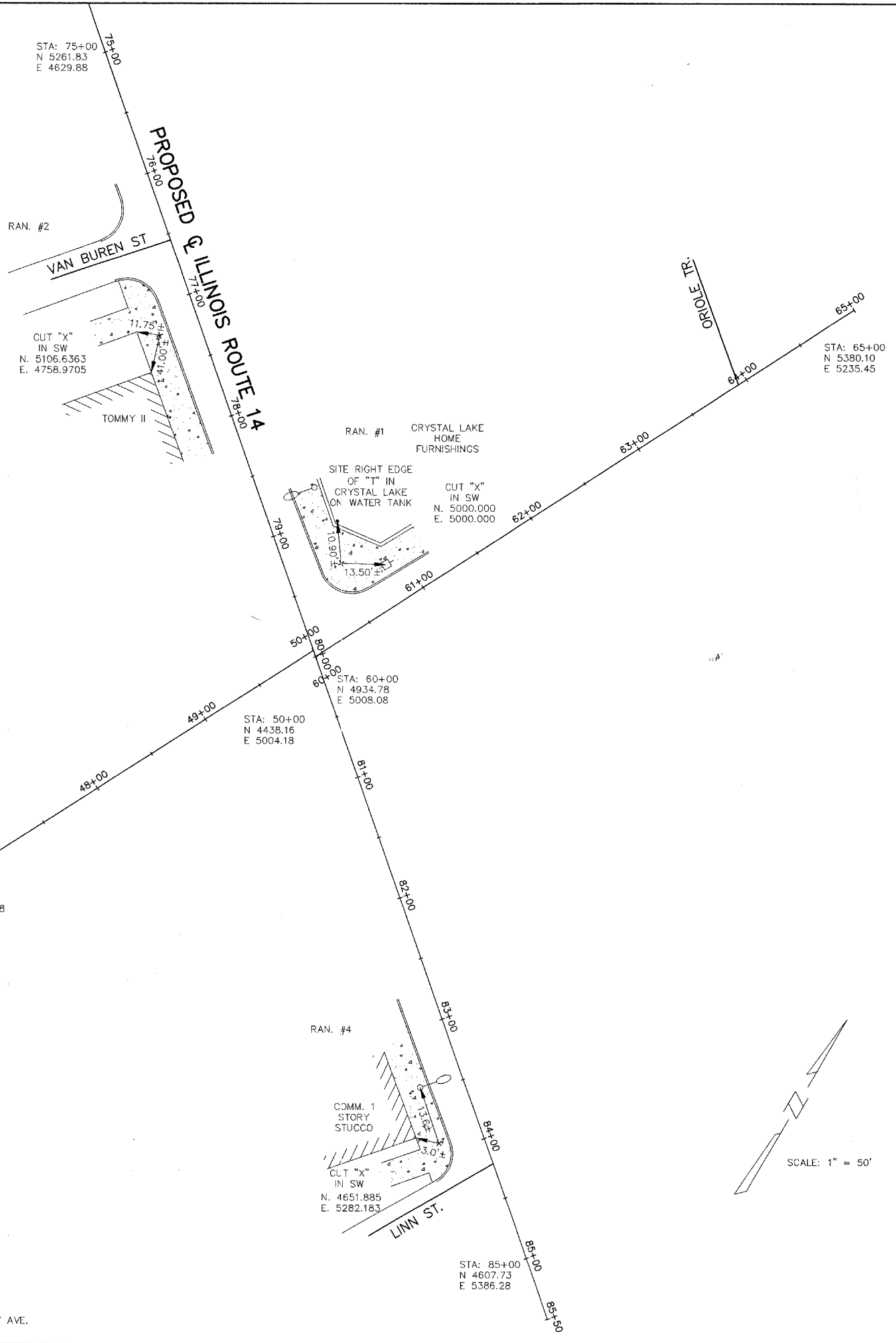
* STATION 46+85 TO 50+00
 ** COMBINATION CONCRETE CURB AND GUTTER TYPE B-6.24 AT THE U.S. ROUTE 14 RETURNS

NOTE: STATION 50+00 TO STATION 63+68
 PAVEMENT MARKINGS ONLY

F.A.U.	SECTION	COUNTY	TOTAL SHEET
ROUTE	00-00097-00-CH	McHENRY	SHTS. NO.
120	STATE SECTION	28	5
ALIGNMENT & TIES			
F.H.W.A. REG. 5 ILLINOIS PROJECT NO. F-0305(023)			

83725

PROPOSED ϕ ILLINOIS ROUTE 1A



STA: 75+00
N 5261.83
E 4629.88

RAN. #2

VAN BUREN ST

CUT "X"
IN SW
N. 5106.6363
E. 4758.9705

TOMMY II

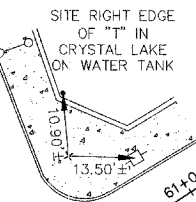
RAN. #10

VAN BUREN ST.

SPIKE NAIL
N. 4916.465
E. 4564.585

PIERSON ST.

RAN. #1 CRYSTAL LAKE HOME FURNISHINGS



CUT "X"
IN SW
N. 5000.000
E. 5000.000

STA: 65+00
N 5380.10
E 5235.45

ORIOLE TR.

RAN. #11, 377 PEIRSON ST.

CUT "X" IN SW @ 377 PEIRSON ST.
N. 4736.00
E. 4679.07

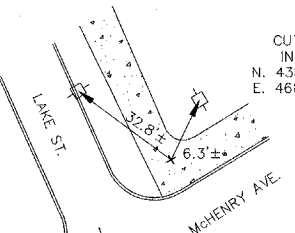
PIERSON ST.
McHENRY AVE.

STA: 50+00
N 4438.16
E 5004.18

STA: 60+00
N 4934.78
E 5008.08

RAN. #7, 380 McHENRY AVE.

CUT "X" IN SW
N. 4383.5597
E. 4686.5775



STA: 46+54.68
N 4631.31
E 4845.77

PROPOSED ϕ McHENRY AVENUE

RAN. #6

CUT "X" IN SW
N. 4143.2287
E. 4624.1762

STA: 42+00
N 4227.29
E 4637.21

STA: 45+00
N 4493.86
E 4774.82

RAN. #4

COMM. 1 STORY STUCCO

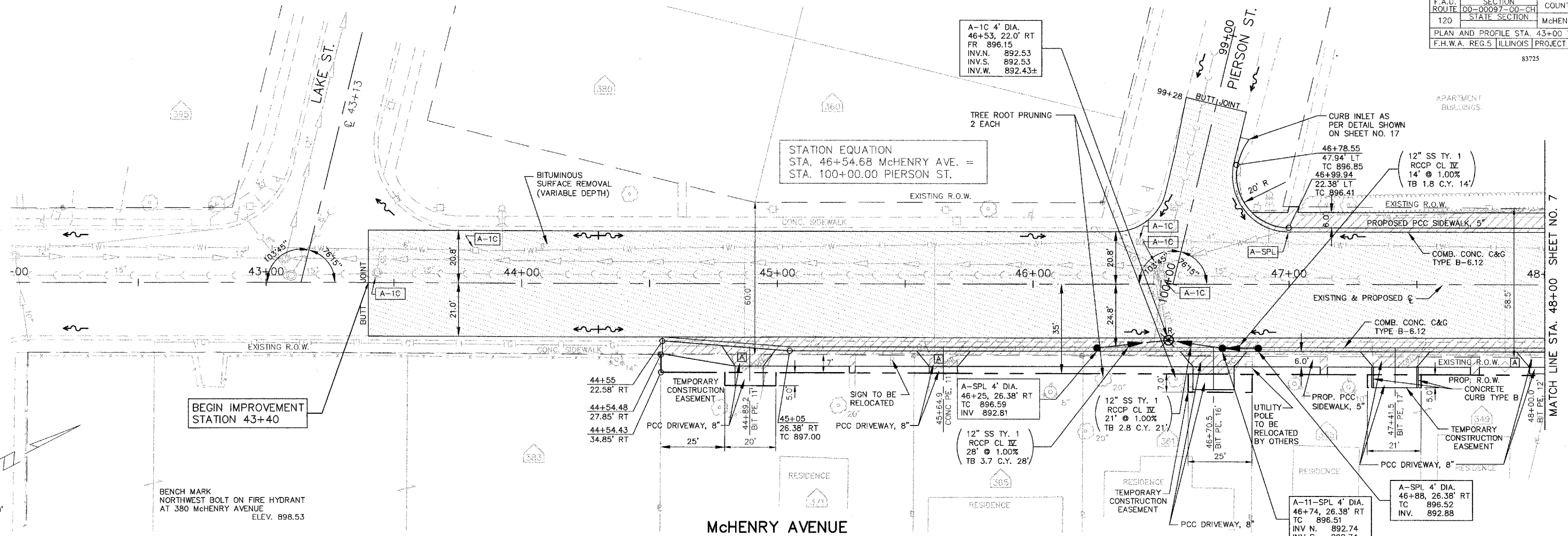
CUT "X" IN SW
N. 4651.885
E. 5282.183

SCALE: 1" = 50'

SPIKE NAIL
N. 4359.45
E. 4941.305

STA: 85+00
N 4607.73
E 5386.28

RAN. #14, 371 McHENRY AVE.

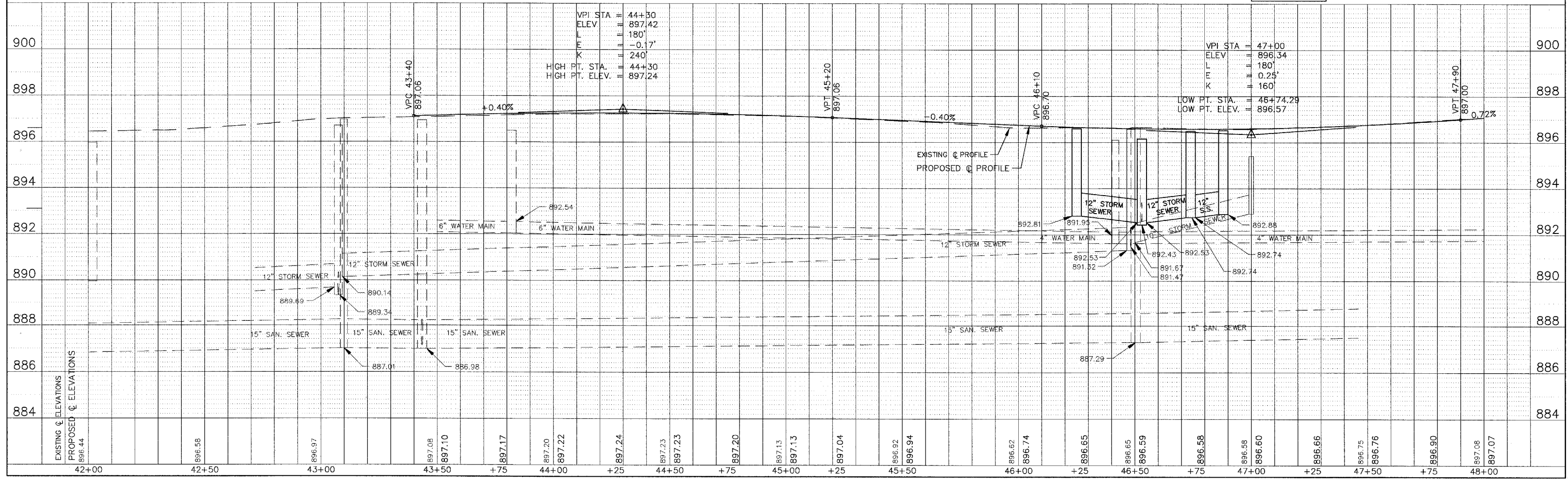


SCALE: 1" = 20'

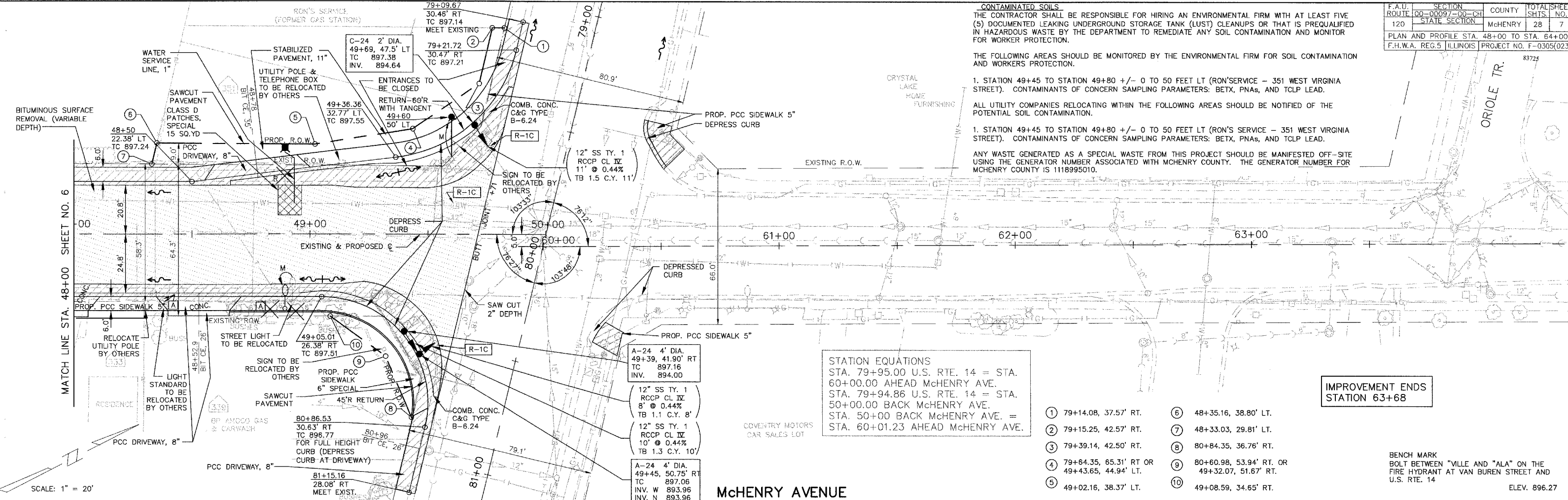
BENCH MARK
 NORTHWEST BOLT ON FIRE HYDRANT
 AT 380 McHENRY AVENUE
 ELEV. 898.53

McHENRY AVENUE

MATCH LINE STA. 48+00 SHEET NO. 7



F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEET
120	00-0097-00-CH	McHENRY	28
STATE SECTION			7
PLAN AND PROFILE STA.	48+00 TO STA. 64+00		
F.H.W.A. REG.5	ILLINOIS PROJECT NO. F-0305(023)		



CONTAMINATED SOILS
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK (LUST) CLEANUPS OR THAT IS PREQUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE ANY SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

THE FOLLOWING AREAS SHOULD BE MONITORED BY THE ENVIRONMENTAL FIRM FOR SOIL CONTAMINATION AND WORKERS PROTECTION.

1. STATION 49+45 TO STATION 49+80 +/- 0 TO 50 FEET LT (RON'S SERVICE - 351 WEST VIRGINIA STREET). CONTAMINANTS OF CONCERN SAMPLING PARAMETERS: BETX, PNAS, AND TCLP LEAD.

ALL UTILITY COMPANIES RELOCATING WITHIN THE FOLLOWING AREAS SHOULD BE NOTIFIED OF THE POTENTIAL SOIL CONTAMINATION.

1. STATION 49+45 TO STATION 49+80 +/- 0 TO 50 FEET LT (RON'S SERVICE - 351 WEST VIRGINIA STREET). CONTAMINANTS OF CONCERN SAMPLING PARAMETERS: BETX, PNAS, AND TCLP LEAD.

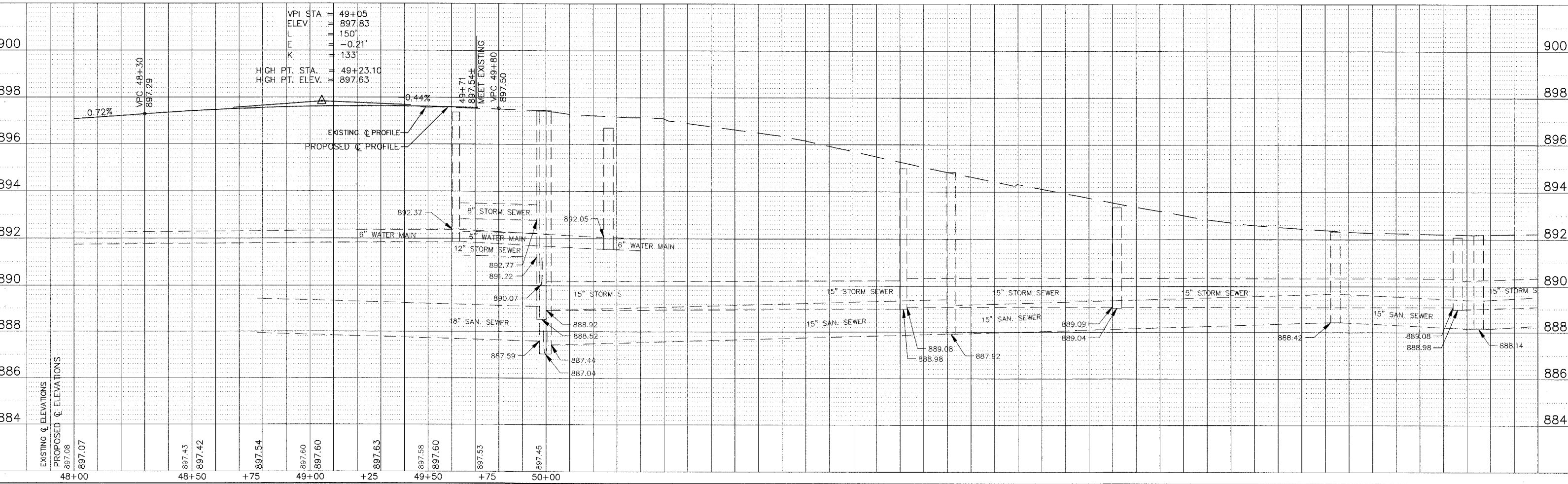
ANY WASTE GENERATED AS A SPECIAL WASTE FROM THIS PROJECT SHOULD BE MANIFESTED OFF-SITE USING THE GENERATOR NUMBER ASSOCIATED WITH McHENRY COUNTY. THE GENERATOR NUMBER FOR McHENRY COUNTY IS 1118995010.

STATION EQUATIONS
 STA. 79+95.00 U.S. RTE. 14 = STA. 60+00.00 AHEAD McHENRY AVE.
 STA. 79+94.86 U.S. RTE. 14 = STA. 50+00.00 BACK McHENRY AVE.
 STA. 50+00 BACK McHENRY AVE. = STA. 60+01.23 AHEAD McHENRY AVE.

- ① 79+14.08, 37.57' RT.
- ② 79+15.25, 42.57' RT.
- ③ 79+39.14, 42.50' RT.
- ④ 79+64.35, 65.31' RT OR 49+43.65, 44.94' LT.
- ⑤ 49+02.16, 38.37' LT.
- ⑥ 48+35.16, 38.80' LT.
- ⑦ 48+33.03, 29.81' LT.
- ⑧ 80+84.35, 36.76' RT.
- ⑨ 80+60.98, 53.94' RT. OR 49+32.07, 51.67' RT.
- ⑩ 49+08.59, 34.65' RT.

IMPROVEMENT ENDS
 STATION 63+68

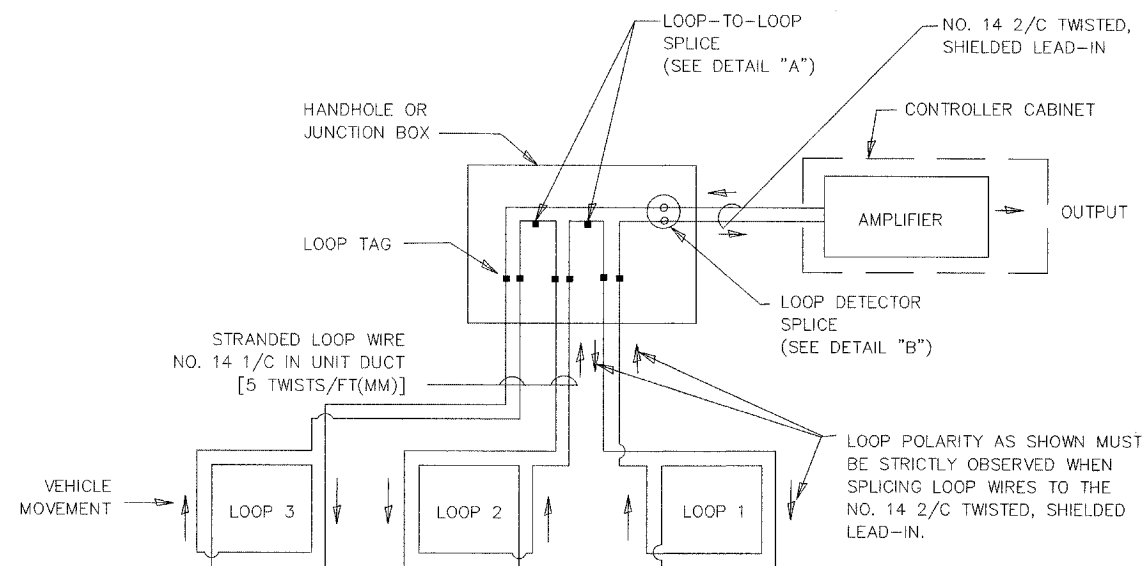
BENCH MARK
 BOLT BETWEEN "VILLE AND "ALA" ON THE FIRE HYDRANT AT VAN BUREN STREET AND U.S. RTE. 14
 ELEV. 896.27



EXISTING ELEVATIONS	PROPOSED ELEVATIONS	STATION
897.08	897.07	48+00
897.43	897.42	48+50
897.54	897.54	+75
897.60	897.60	49+00
897.63	897.63	+25
897.58	897.60	49+50
897.63	897.63	+75
897.45	897.45	50+00

LOOP DETECTOR NOTES

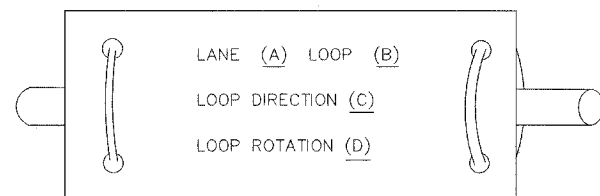
- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED 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.
- PERFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PERFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.



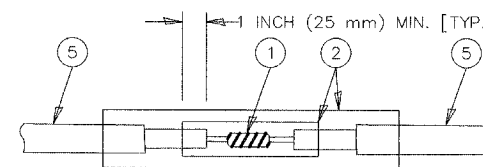
DETECTOR LOOP WIRING SCHEMATIC

- 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.

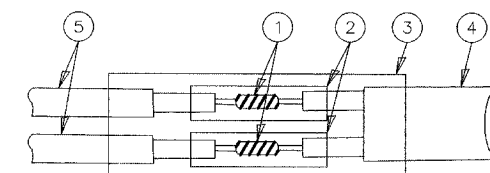
LOOP LEAD-IN CABLE TAG



- 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.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

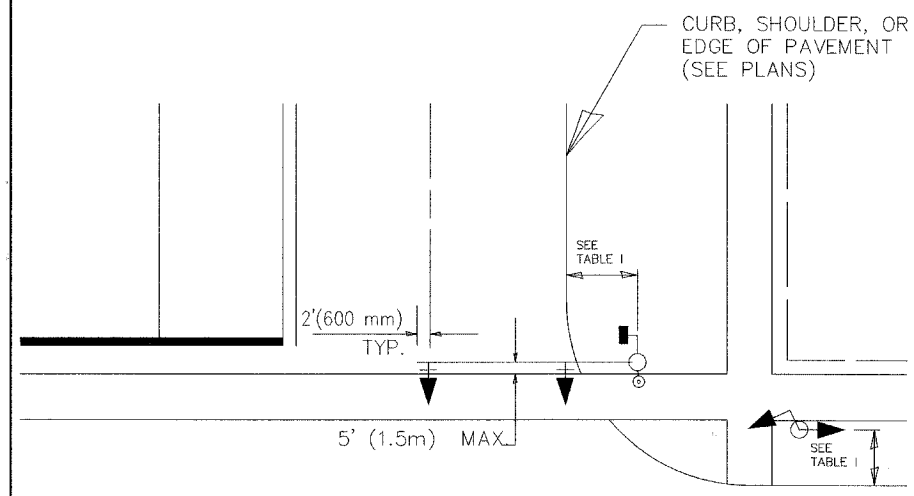
LOOP DETECTOR SPLICE

- WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- 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.

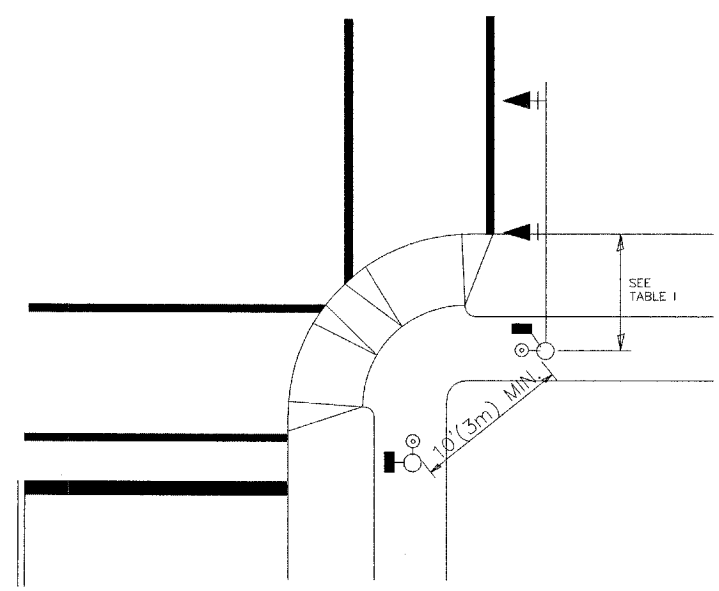
ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	
NAME	DATE
REVISIONS	
VERT. SCALE: NONE	DRAWN BY: RWP
HORZ. SCALE: 1-01-02	DESIGNED BY: DAD
	CHECKED BY: DAZ
	SHEET 1 OF 4

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

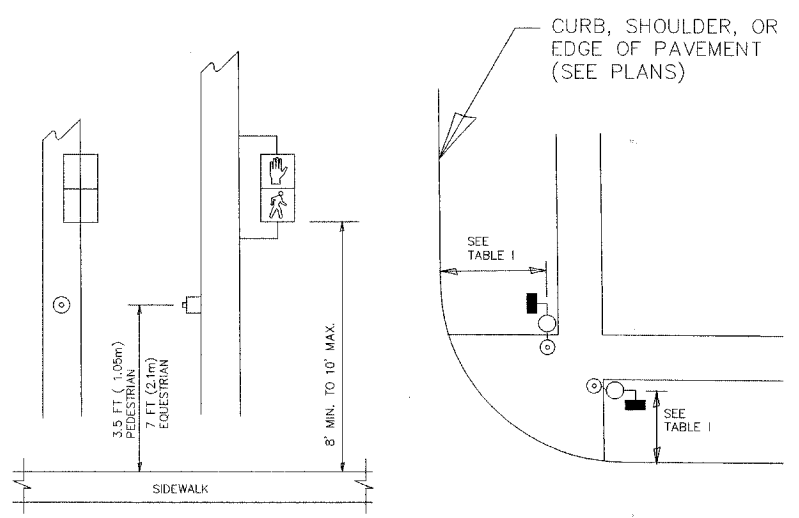
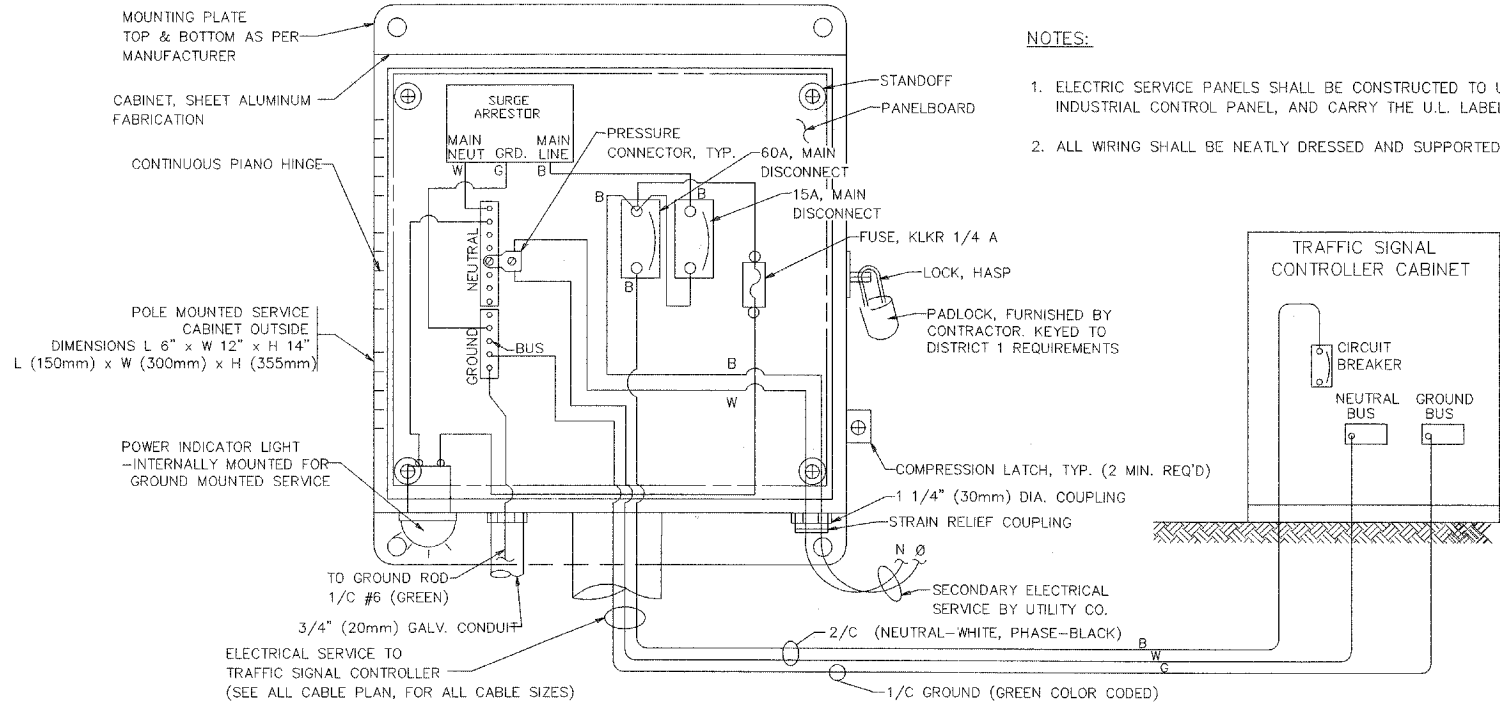


TABLE I

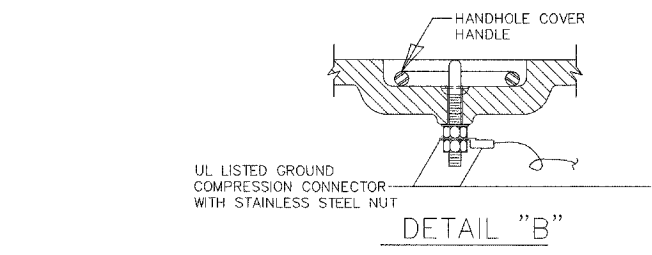
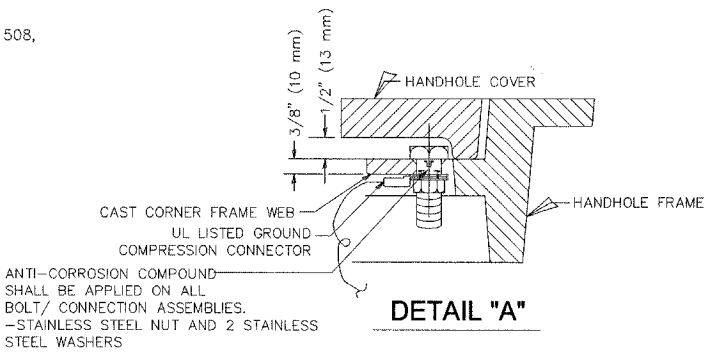
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	
NAME	DATE
REVISIONS	
VERT. SCALE: NONE	DRAWN BY: RWP
HORZ. SCALE: NONE	DESIGNED BY: DAD
DATE: 1-01-02	CHECKED BY: DAZ
	SHEET 2 OF 4

F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEET
120	00-00097-00-CH STATE SECTION	MCHENRY	28
STANDARD TRAFFIC SIGNAL DESIGN DETAILS			NO. 10
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F-0305(023)			

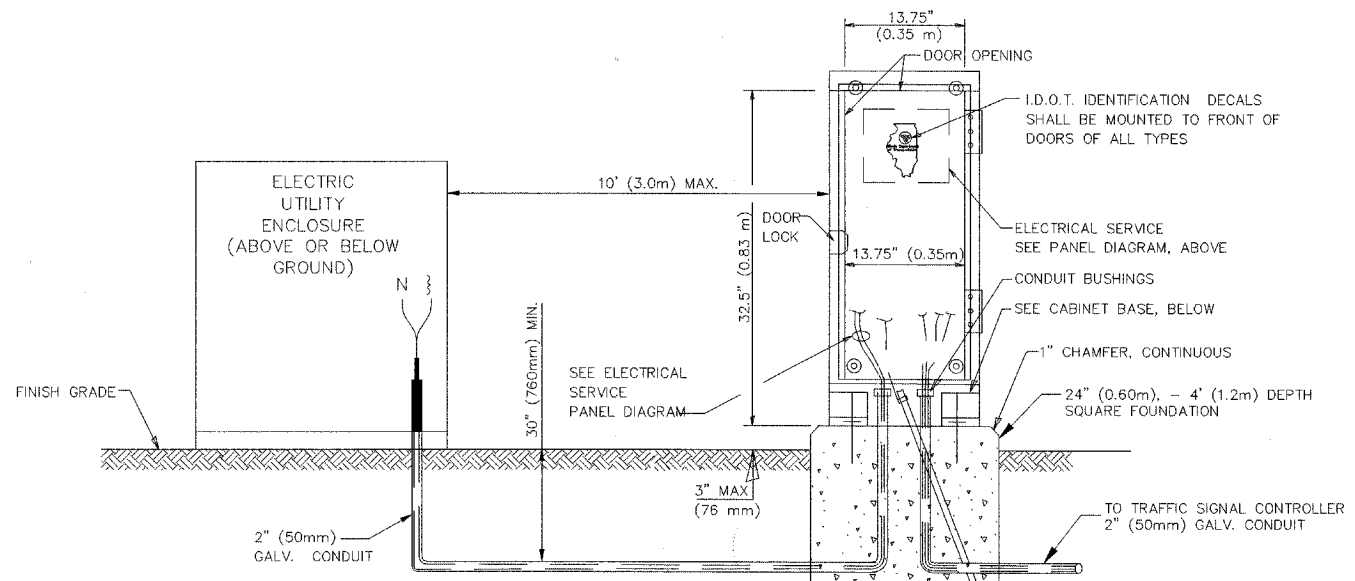


- NOTES:
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
 2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

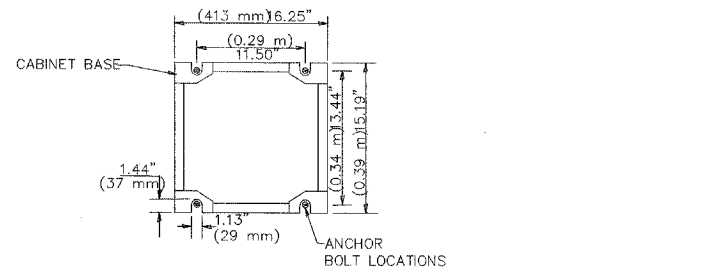


- NOTES:
- GROUNDING SYSTEM**
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
 2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.

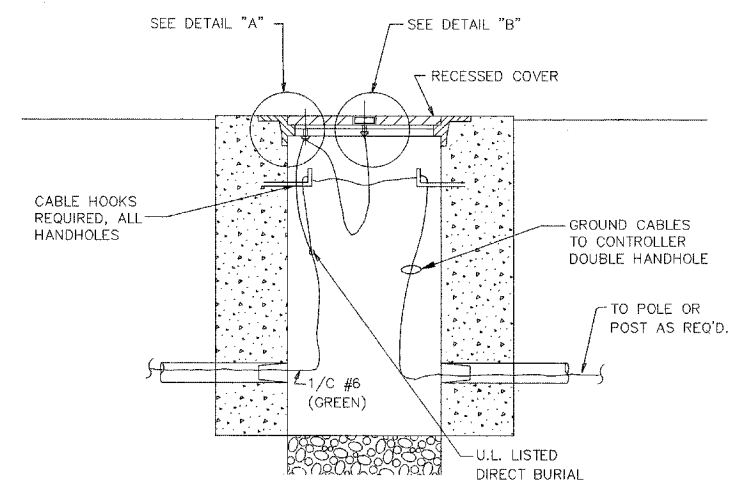
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN) (NOT TO SCALE)



SERVICE INSTALLATION GROUND MOUNT (NOT TO SCALE)

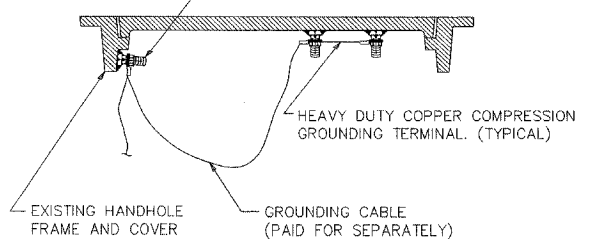


CABINET - BASE BOLT PATTERN (NOT TO SCALE)

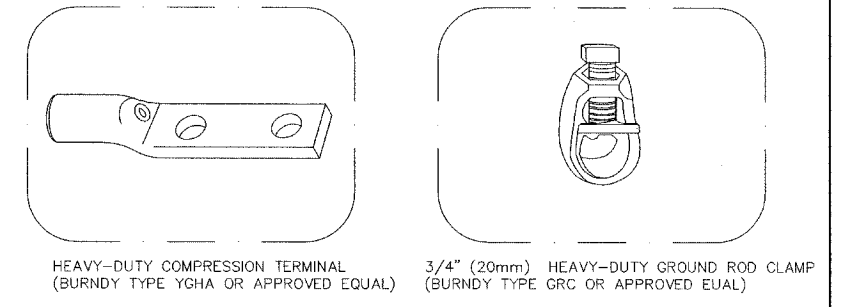


HANDHOLE COVER & FRAME - GROUNDING DETAIL (NOT TO SCALE)

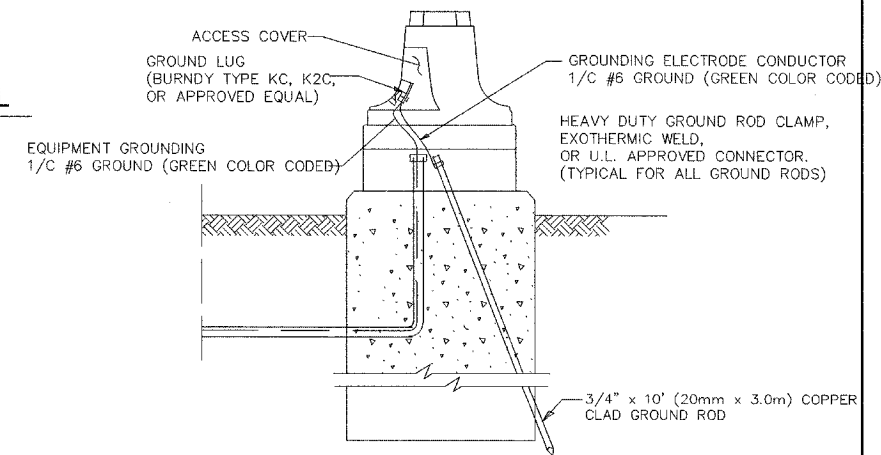
(2) 1/2" x 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL)



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

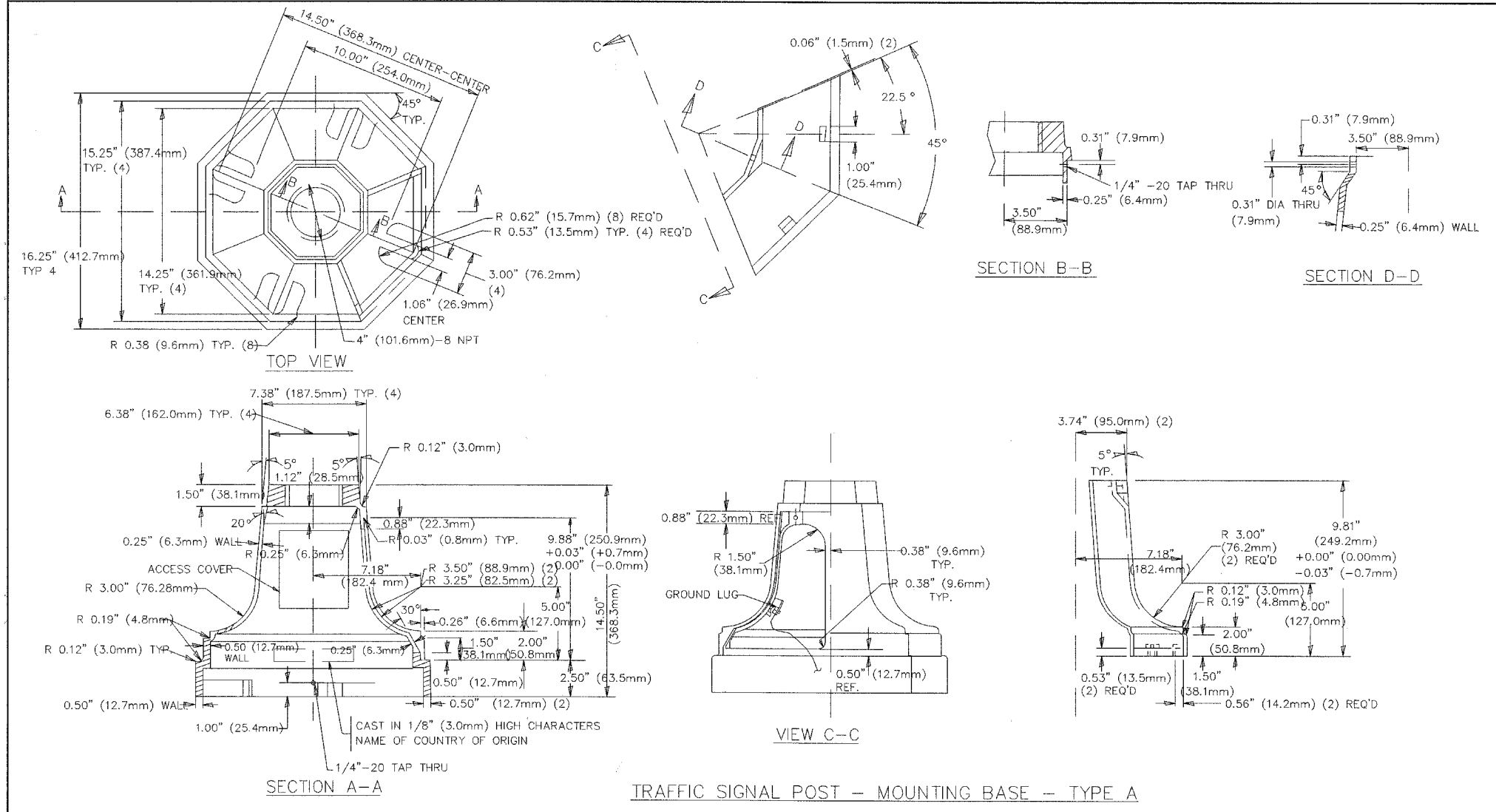


- NOTES:
- o ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - o GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

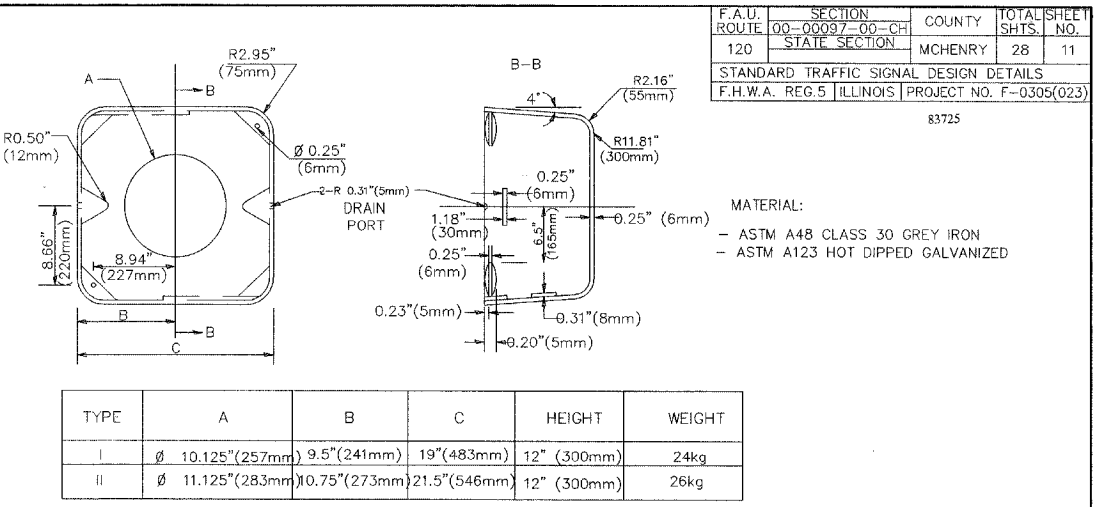


MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE)

ILLINOIS DEPARTMENT OF TRANSPORTATION	
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	
NAME	DATE
REVISIONS	
VERT. SCALE:	NONE
HORZ. SCALE:	1-01-02
DRAWN BY:	RWP
DESIGNED BY:	DAZ
CHECKED BY:	DAZ
SHEET	3 OF 4

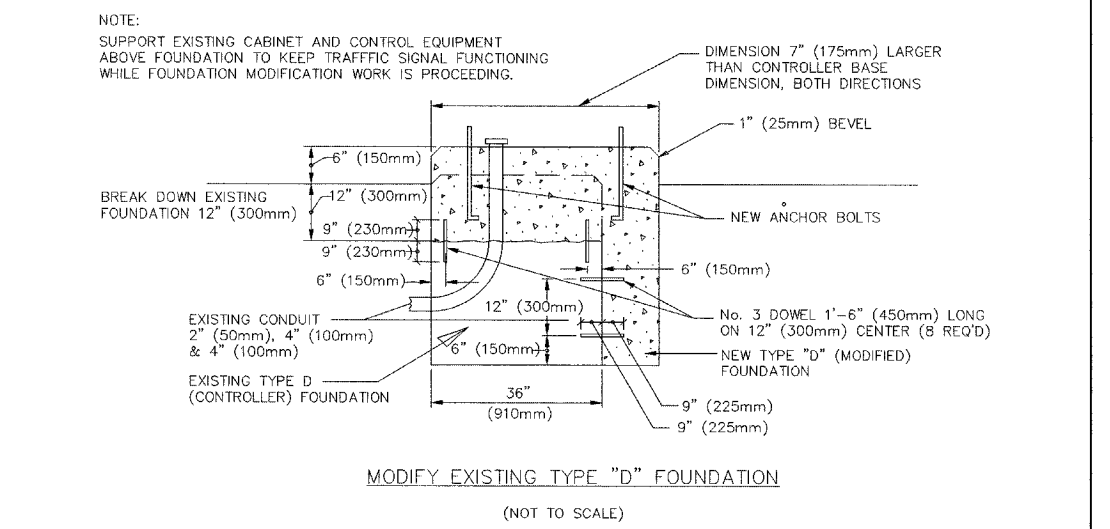


TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

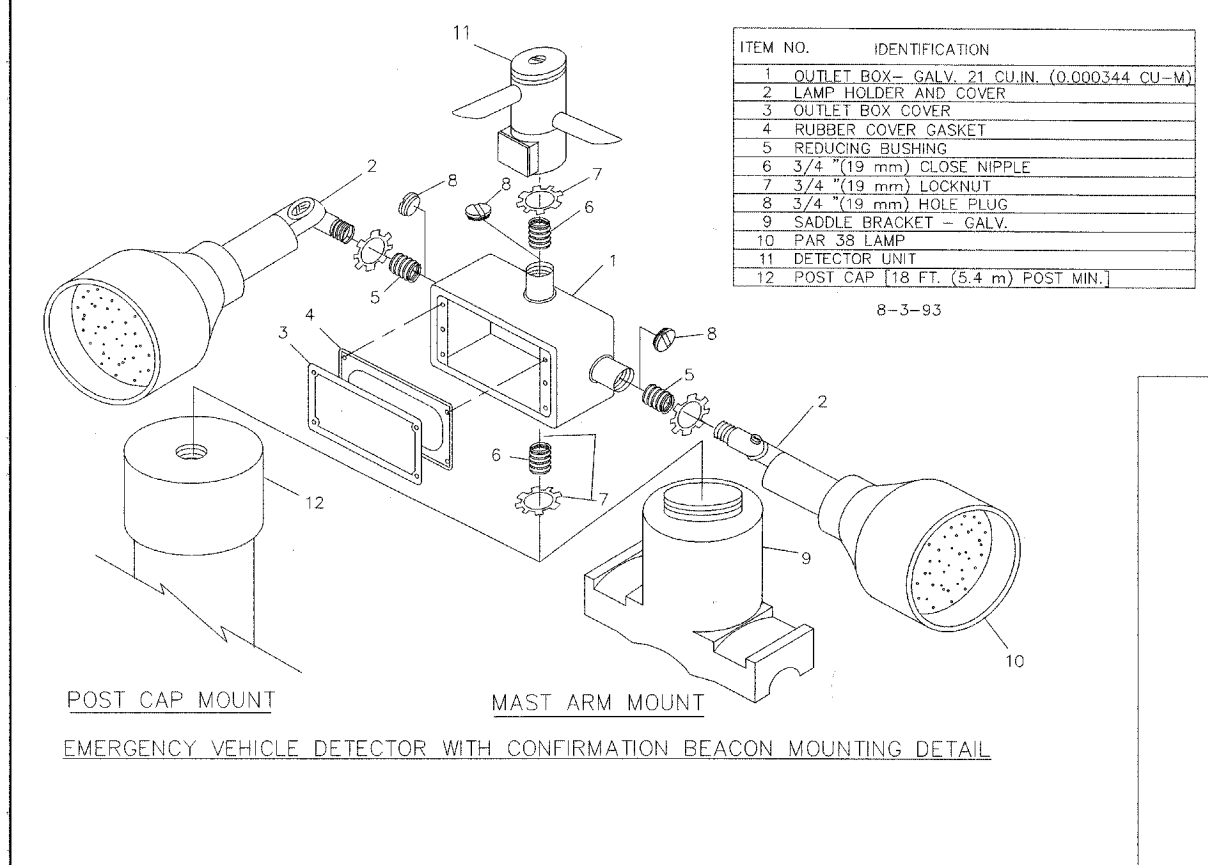


TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\"(300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\"(300mm)	26kg

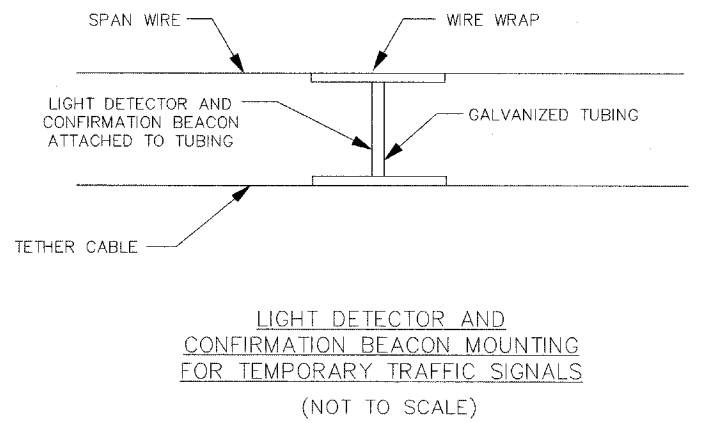
SHROUD DETAIL



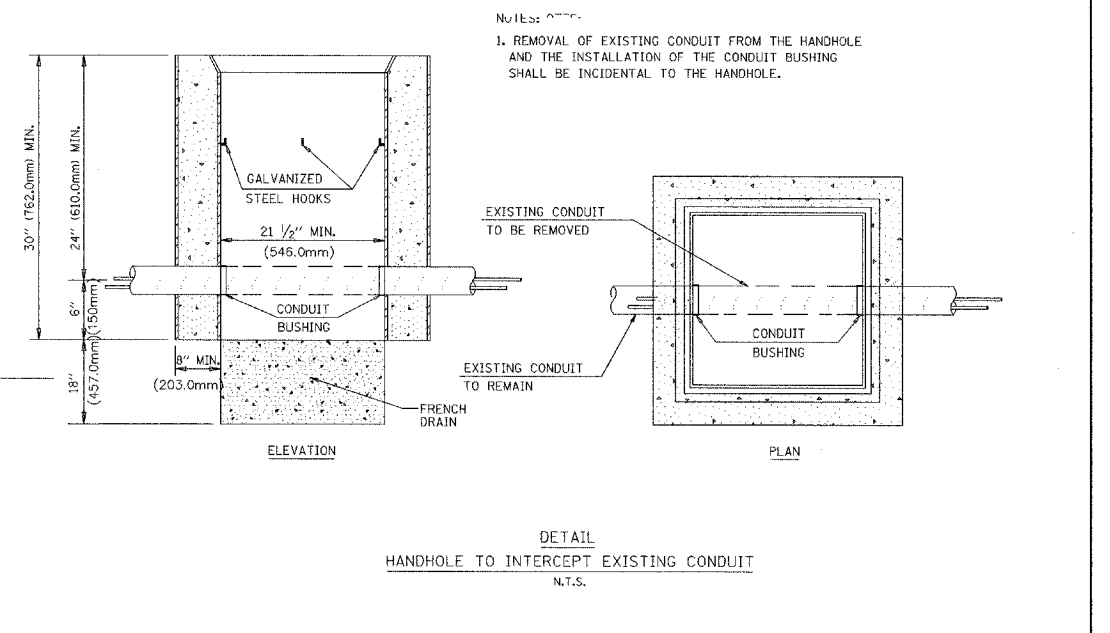
MODIFY EXISTING TYPE "D" FOUNDATION
(NOT TO SCALE)



- NOTES:
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
 - ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
 ITEM #2- MULBERRY CON-0-SHADE LAMP SHIELD OR EQUIVALENT
 ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
 - 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.



LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS
(NOT TO SCALE)



DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

DATE: 1-01-02

VERT. SCALE: NONE
 HORZ. SCALE: NONE

DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 4 OF 4

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR UNLESS OTHERWISE STATED IN THE PLANS. ON PROJECTS WITH MULTIPLE TEMPORARY TRAFFIC SIGNAL INSTALLATIONS, ALL CONTROLLERS SHALL BE THE SAME MANUFACTURER BRAND AND MODEL NUMBER WITH CURRENT SOFTWARE INSTALLED.
2. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED INSTALLED IN CABINETS WITH 8 PHASE BACK PANELS, CAPABLE OF SUPPLYING 255 SECONDS OF CYCLE LENGTH AND INDIVIDUAL PHASE LENGTH AND INDIVIDUAL PHASE LENGTH SETTINGS UP TO 99 SECONDS. ON PROJECTS WITH ONE LANE OPEN AND TWO WAY TRAFFIC FLOW, SUCH AS BRIDGE DECK REPAIRS, THE TEMPORARY SIGNAL CONTROLLER SHALL BE CAPABLE OF PROVIDING ADJUSTABLE ALL RED CLEARANCE SETTINGS OF UP TO 30 SECONDS IN LENGTH.
3. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL MEET OR EXCEED THE REQUIREMENTS OF SECTION 857 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE TRAFFIC SIGNAL SPECIAL PROVISIONS WITH REGARDS TO INTERNAL TIME BASE COORDINATION, PREEMPTION AND TESTING.
4. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE OF THE 300mm (12") TYPE. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.

5. THE EXISTING TRAFFIC SIGNAL SYSTEM INTERCONNECTS SHALL BE MAINTAINED AS A PART OF THE TEMPORARY TRAFFIC SIGNAL INSTALLATION AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
6. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED, AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE.
7. MAINTAIN THE LEFT TURN PHASES DURING THE CONSTRUCTION.
8. TEMPORARY POLES SHALL BE PLACED OUT OF THE CONSTRUCTION AREA, SIDEWALKS, ETC.

STATION EQUATIONS
 STA. 79+95.00 U.S. RTE. 14 =
 STA. 60+00.00 AHEAD McHENRY AVE.
 STA. 79+94.86 U.S. RTE. 14 =
 STA. 50+00.00 BACK McHENRY AVE.
 STA. 50+00 BACK McHENRY AVE. =
 STA. 60+01.23 AHEAD McHENRY AVE.

1 EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: CITY OF CRYSTAL LAKE

- 2 EACH 1-FACE, PEDESTRIAN SIGNAL HEADS
- 2 EACH PEDESTRIAN PUSH BUTTONS
- 2 EACH STEEL MAST ARM AND POLE ASSEMBLY
- 2 EACH 1-FACE, 3 - SECTION SIGNAL HEADS
- 2 EACH 1-FACE, 5 - SECTION SIGNAL HEADS

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 SERVICE INSTALLATION

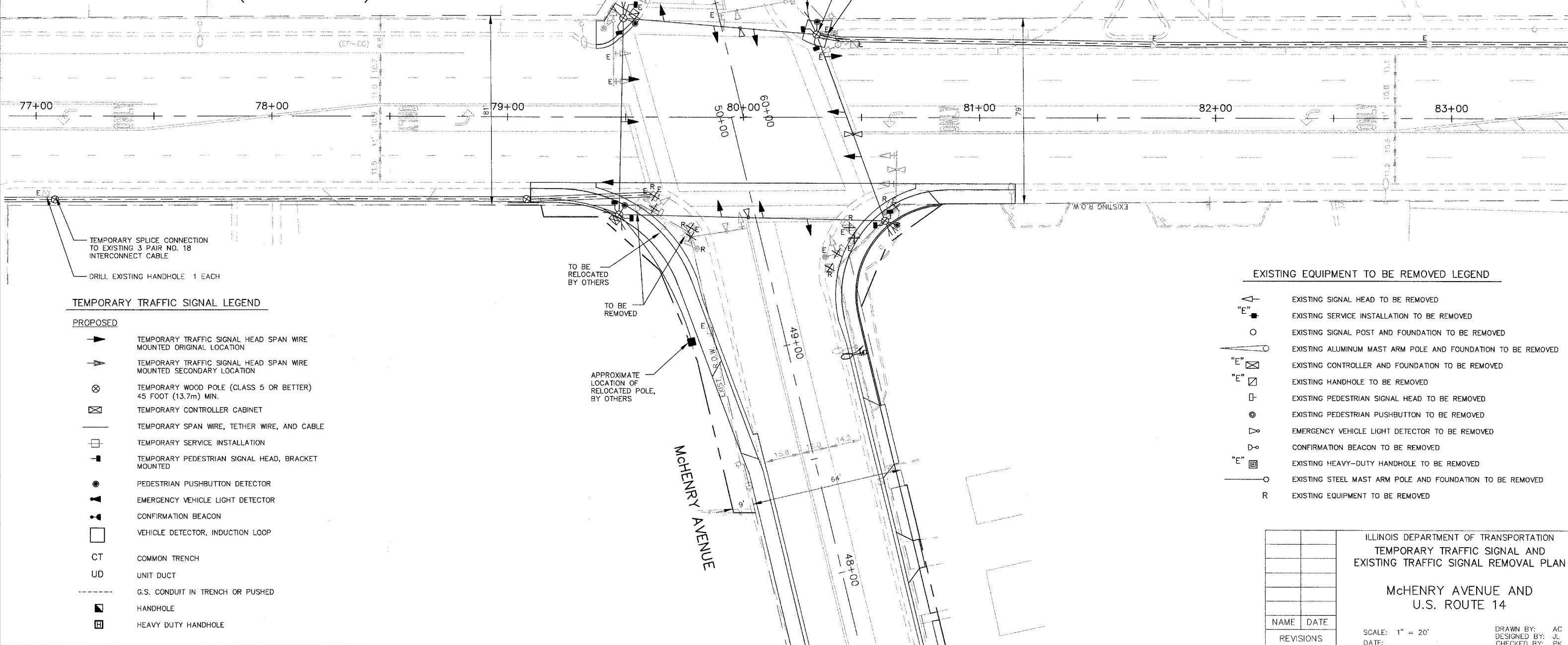
F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS
120	00-00097-00-CH	MCHENRY	28
TRAFFIC SIGNALS			NO. 12
F.H.W.A. REG. 5 ILLINOIS PROJECT NO. F-0305(02)			

83725

CONSTRUCTION NOTES

1. REMOVE THE EXISTING INTERCONNECT CABLE, THE APPROXIMATE LENGTH IS 2,345 FEET FROM THE McHENRY AVE. CONTROLLER TO THE DOLE AVE. CONTROLLER ALONG U.S. ROUTE 14. SEE SHEET NO. 13, 16 & 17 FOR DETAILS.
2. REMOVE THE EXISTING INTERCONNECT CABLE, THE APPROXIMATE LENGTH IS 2,268 FEET FROM THE McHENRY AVE. CONTROLLER TO THE KEITH AVE. CONTROLLER ALONG U.S. ROUTE 14. SEE SHEET NO. 13, 16 & 17 FOR DETAILS.
3. EXISTING TRAFFIC SIGNAL CABINET AND CONTROLLER TO BE RELOCATED.
4. RELOCATE EXISTING LIGHT DETECTOR
5. BAG ALL EXISTING SIGNAL HEADS THAT ARE TO REMAIN IN PLACE.

U.S. ROUTE 14 (VIRGINIA STREET)

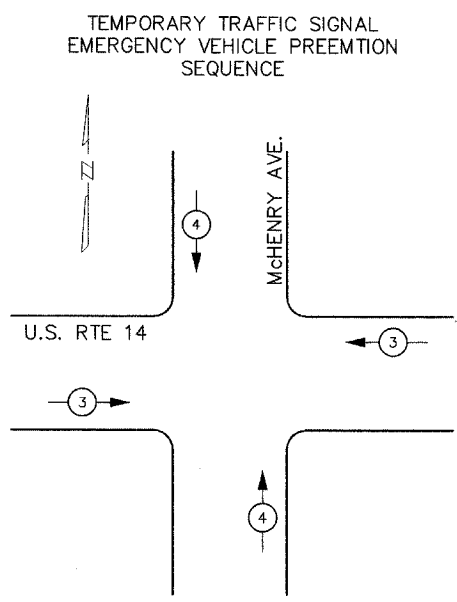
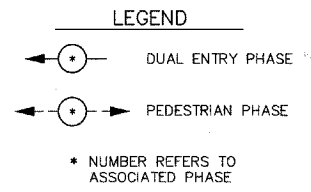
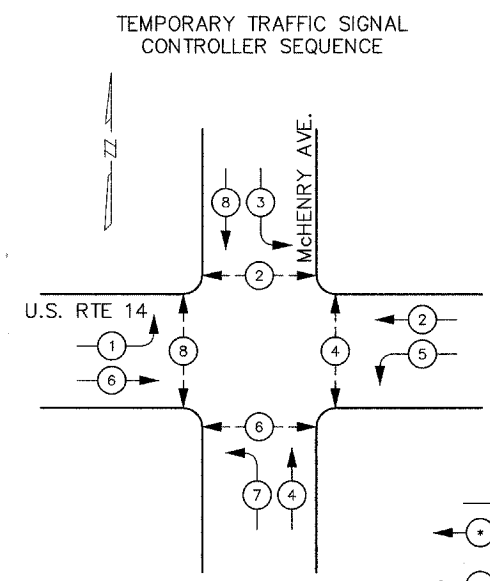


TEMPORARY SPLICE CONNECTION TO EXISTING 3 PAIR NO. 18 INTERCONNECT CABLE
 DRILL EXISTING HANDHOLE 1 EACH

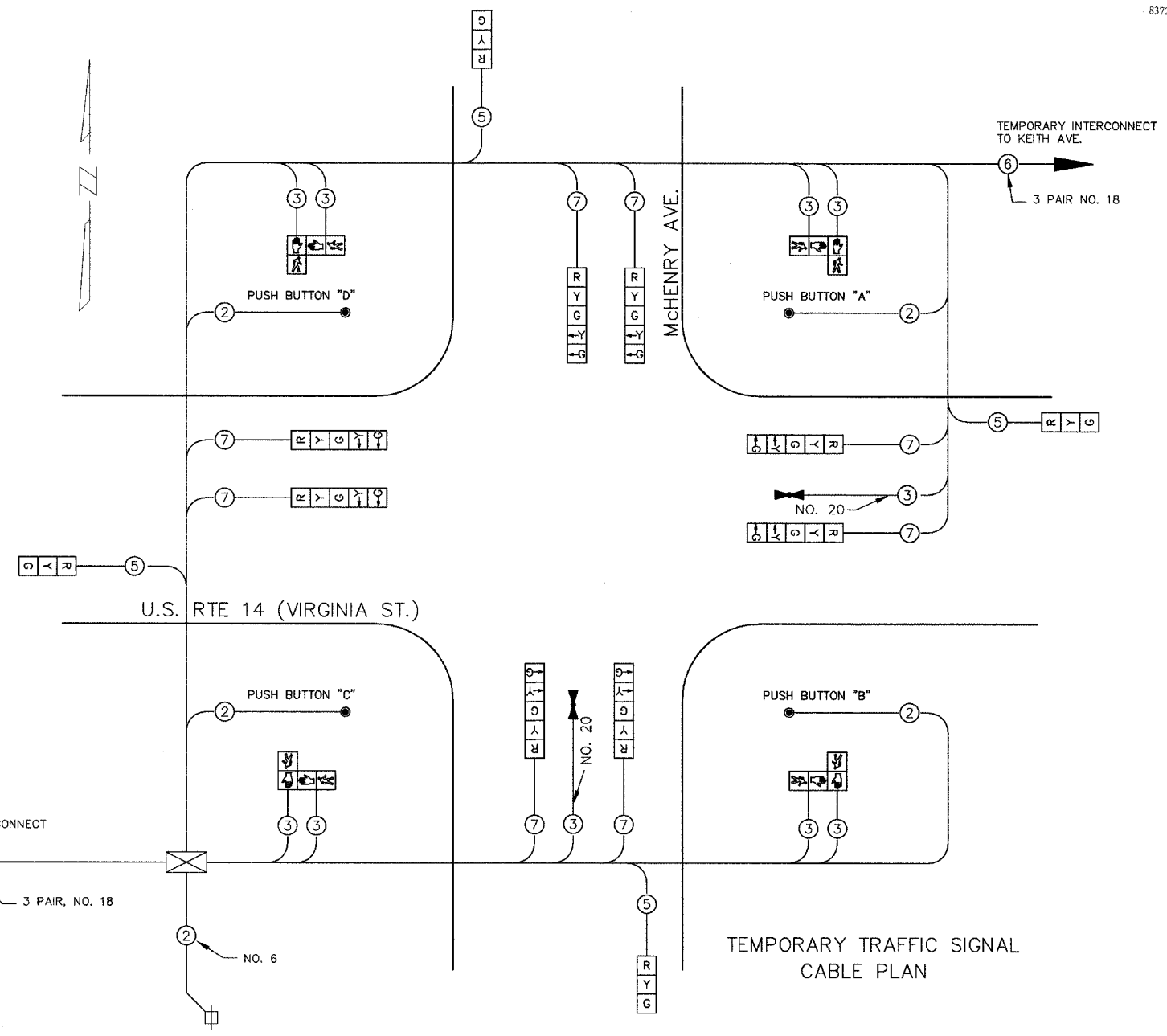
- TEMPORARY TRAFFIC SIGNAL LEGEND
- PROPOSED
- ▶ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED ORIGINAL LOCATION
 - ◀ TEMPORARY TRAFFIC SIGNAL HEAD SPAN WIRE MOUNTED SECONDARY LOCATION
 - ⊗ TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MIN.
 - ⊠ TEMPORARY CONTROLLER CABINET
 - TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE
 - TEMPORARY SERVICE INSTALLATION
 - TEMPORARY PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED
 - PEDESTRIAN PUSHBUTTON DETECTOR
 - ▲ EMERGENCY VEHICLE LIGHT DETECTOR
 - CONFIRMATION BEACON
 - VEHICLE DETECTOR, INDUCTION LOOP
 - CT COMMON TRENCH
 - UD UNIT DUCT
 - G.S. CONDUIT IN TRENCH OR PUSHED
 - HANDHOLE
 - ⊠ HEAVY DUTY HANDHOLE

- EXISTING EQUIPMENT TO BE REMOVED LEGEND
- ▲ EXISTING SIGNAL HEAD TO BE REMOVED
 - "E" EXISTING SERVICE INSTALLATION TO BE REMOVED
 - EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
 - ◀ EXISTING ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED
 - ⊠ "E" EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
 - ⊠ "E" EXISTING HANDHOLE TO BE REMOVED
 - EXISTING PEDESTRIAN SIGNAL HEAD TO BE REMOVED
 - EXISTING PEDESTRIAN PUSHBUTTON TO BE REMOVED
 - ▲ EXISTING EMERGENCY VEHICLE LIGHT DETECTOR TO BE REMOVED
 - EXISTING CONFIRMATION BEACON TO BE REMOVED
 - ⊠ "E" EXISTING HEAVY-DUTY HANDHOLE TO BE REMOVED
 - EXISTING STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED
 - R EXISTING EQUIPMENT TO BE REMOVED

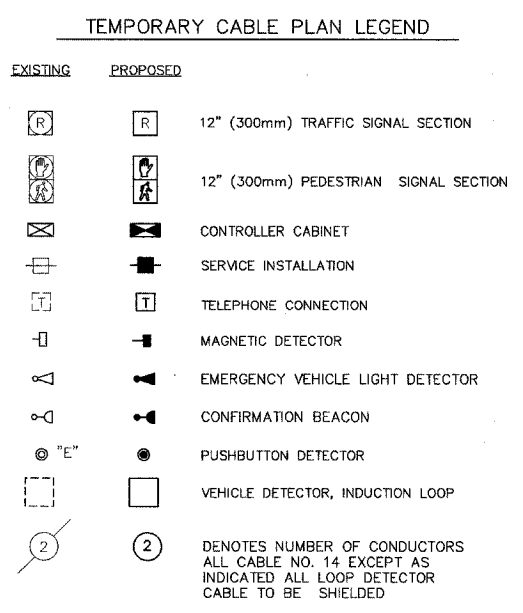
ILLINOIS DEPARTMENT OF TRANSPORTATION	
TEMPORARY TRAFFIC SIGNAL AND EXISTING TRAFFIC SIGNAL REMOVAL PLAN	
McHENRY AVENUE AND U.S. ROUTE 14	
NAME	DATE
REVISIONS	
SCALE: 1" = 20'	
DATE:	
DRAWN BY: AC	
DESIGNED BY: JL	
CHECKED BY: PK	



PROPOSED TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↔	↕



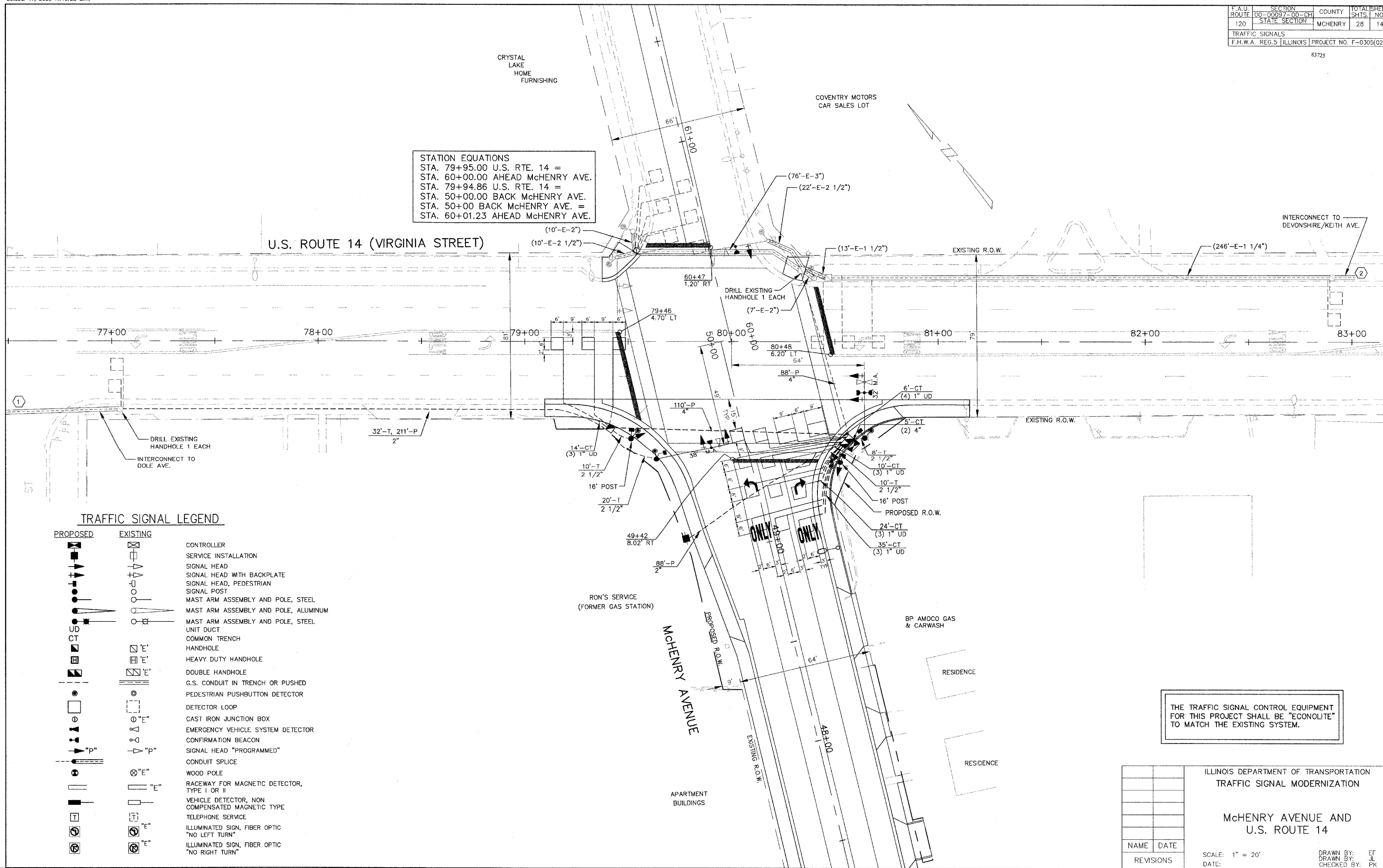
I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	x WATTAGE		% OPERATION	
		INCAND.	LED		
SIGNAL (RED)	8	135	17	0.50	540.0
(YELLOW)	8	135	25	0.25	270.0
(GREEN)	8	135	15	0.25	270.0
ARROW	16	135	12	0.10	216.0
PED. SIGNAL	16	90	25	1.00	1440.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN	0	84		0.05	
					0.0
ENERGY COSTS TO:					TOTAL = 2836.0
City of Crystal Lake P.O. BOX 597 Crystal Lake, IL 60039-0597					
ENERGY SUPPLY CONTACT:	Rick Correnti				
PHONE:	815-490-2283				
COMPANY:	Commonwealth Edison				



- NOTE:**
- PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.
 - PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.
 - PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8.
 - PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 8 AND 2.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING SYSTEM.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
TEMPORARY TRAFFIC SIGNAL CABLE PLAN	
PHASE DESIGNATION DIAGRAM	
MCHENRY AVENUE AND U.S. ROUTE 14	
NAME	DATE
REVISIONS	
SCALE: NONE	DRAWN BY: EF
DATE:	DESIGNED BY: JL
	CHECKED BY: PK



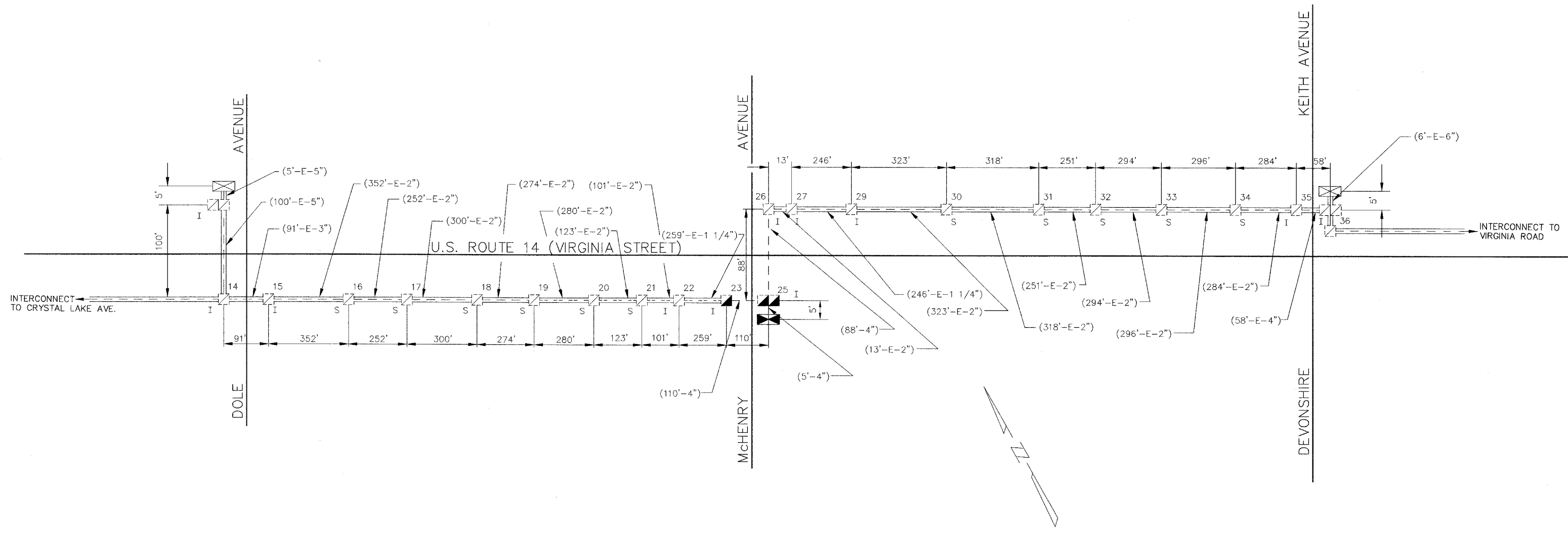
STATION EQUATIONS
 STA. 79+95.00 U.S. RTE. 14 =
 STA. 60+00.00 AHEAD MCHENRY AVE.
 STA. 79+94.86 U.S. RTE. 14 =
 STA. 50+00.00 BACK MCHENRY AVE.
 STA. 50+00 BACK MCHENRY AVE. =
 STA. 60+01.23 AHEAD MCHENRY AVE.

TRAFFIC SIGNAL LEGEND

PROPOSED	EXISTING	
[Symbol]	[Symbol]	CONTROLLER
[Symbol]	[Symbol]	SERVICE INSTALLATION
[Symbol]	[Symbol]	SIGNAL HEAD
[Symbol]	[Symbol]	SIGNAL HEAD WITH BACKPLATE
[Symbol]	[Symbol]	SIGNAL HEAD, PEDESTRIAN
[Symbol]	[Symbol]	SIGNAL POST
[Symbol]	[Symbol]	MAST ARM ASSEMBLY AND POLE, STEEL
[Symbol]	[Symbol]	MAST ARM ASSEMBLY AND POLE, ALUMINUM
[Symbol]	[Symbol]	MAST ARM ASSEMBLY AND POLE, STEEL
[Symbol]	[Symbol]	UNIT DUCT
[Symbol]	[Symbol]	COMMON TRENCH
[Symbol]	[Symbol]	HANDHOLE
[Symbol]	[Symbol]	HEAVY DUTY HANDHOLE
[Symbol]	[Symbol]	DOUBLE HANDHOLE
[Symbol]	[Symbol]	G.S. CONDUIT IN TRENCH OR PUSHED
[Symbol]	[Symbol]	PEDESTRIAN PUSHBUTTON DETECTOR
[Symbol]	[Symbol]	DETECTOR LOOP
[Symbol]	[Symbol]	CAST IRON JUNCTION BOX
[Symbol]	[Symbol]	EMERGENCY VEHICLE SYSTEM DETECTOR
[Symbol]	[Symbol]	CONFIRMATION BEACON
[Symbol]	[Symbol]	SIGNAL HEAD "PROGRAMMED"
[Symbol]	[Symbol]	CONDUIT SPLICE
[Symbol]	[Symbol]	WOOD POLE
[Symbol]	[Symbol]	RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR II
[Symbol]	[Symbol]	VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
[Symbol]	[Symbol]	TELEPHONE SERVICE
[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
[Symbol]	[Symbol]	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING SYSTEM.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
TRAFFIC SIGNAL MODERNIZATION	
MCHENRY AVENUE AND U.S. ROUTE 14	
NAME	DATE
REVISIONS	
SCALE: 1" = 20'	
DATE:	
DRAWN BY: EF	CHECKED BY: PK



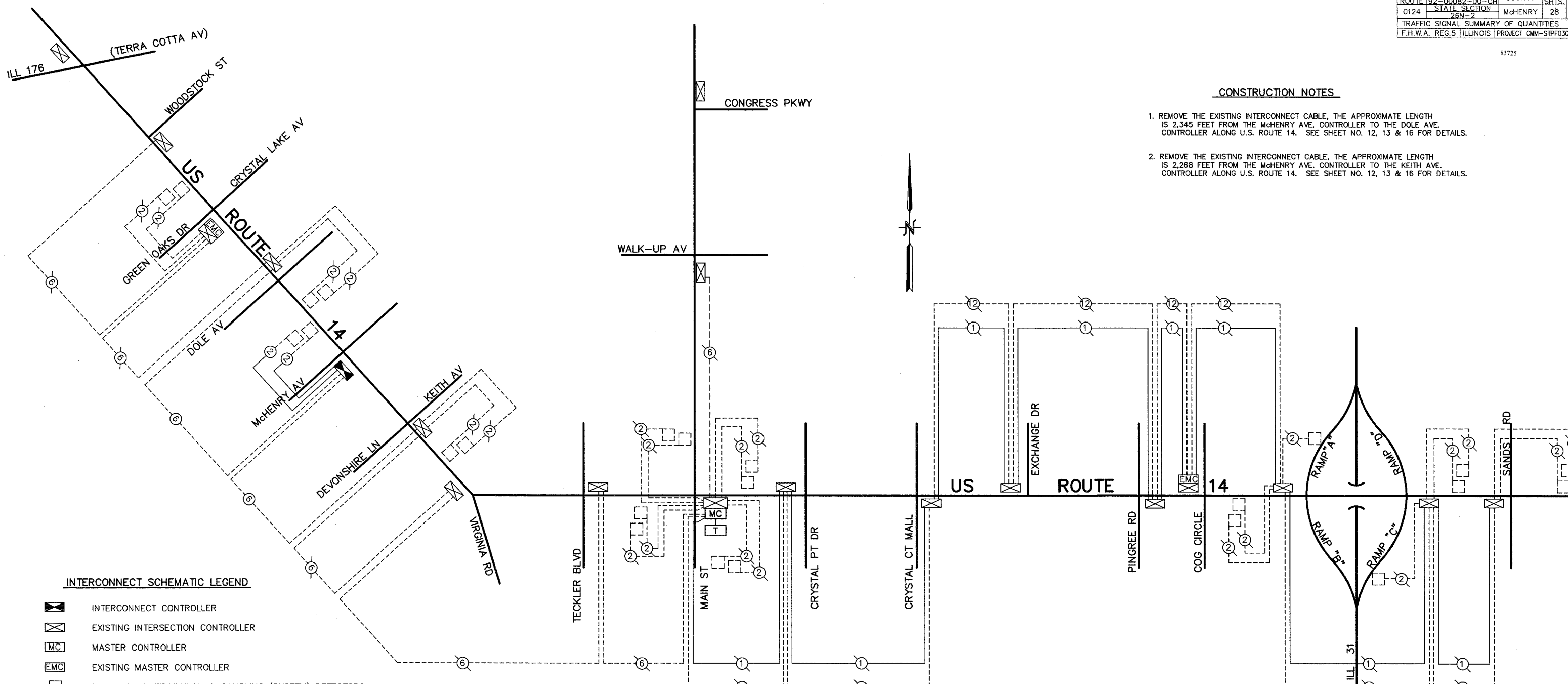
INTERCONNECT QUANTITIES

- 4613 FOOT ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18, 3 PAIR
- 4613 FOOT REMOVE ELECTRIC CABLE FROM CONDUIT

CONSTRUCTION NOTES

1. REMOVE THE EXISTING INTERCONNECT CABLE, THE APPROXIMATE LENGTH IS 2,345 FEET FROM THE MCHENRY AVE. CONTROLLER TO THE DOLE AVE. CONTROLLER ALONG U.S. ROUTE 14. SEE SHEET NO. 12, 13 & 17 FOR DETAILS.
2. REMOVE THE EXISTING INTERCONNECT CABLE, THE APPROXIMATE LENGTH IS 2,268 FEET FROM THE MCHENRY AVE. CONTROLLER TO THE KEITH AVE. CONTROLLER ALONG U.S. ROUTE 14. SEE SHEET NO. 12, 13 & 17 FOR DETAILS.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
INTERCONNECT SCHEMATIC	
(DOLE AVENUE TO KEITH AVENUE)	
U.S. ROUTE 14	
NAME	DATE
REVISIONS	
SCALE: NONE	DRAWN BY: E.F.
DATE:	DESIGNED BY: J.L.
	CHECKED BY: P.K.



CONSTRUCTION NOTES

1. REMOVE THE EXISTING INTERCONNECT CABLE, THE APPROXIMATE LENGTH IS 2,345 FEET FROM THE McHENRY AVE. CONTROLLER TO THE DOLE AVE. CONTROLLER ALONG U.S. ROUTE 14. SEE SHEET NO. 12, 13 & 16 FOR DETAILS.
2. REMOVE THE EXISTING INTERCONNECT CABLE, THE APPROXIMATE LENGTH IS 2,268 FEET FROM THE McHENRY AVE. CONTROLLER TO THE KEITH AVE. CONTROLLER ALONG U.S. ROUTE 14. SEE SHEET NO. 12, 13 & 16 FOR DETAILS.

INTERCONNECT SCHEMATIC LEGEND

- INTERCONNECT CONTROLLER
- EXISTING INTERSECTION CONTROLLER
- MASTER CONTROLLER
- EXISTING MASTER CONTROLLER
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING INTERSECTION & SAMPLING (SYSTEMS) DETECTORS
- INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELD
- EXISTING LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- TELEPHONE CONNECTION
- PROPOSED TRACER CABLE NO. 10 1C
- EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING TELEPHONE CONNECTION
- EXISTING TRACER CABLE 1/C (AS SPECIFIED)

TRAFFIC SIGNAL SYSTEM INTERCONNECT SCHEMATIC

MASTER CONTROLLER INTERSECTION MONITORING SCHEDULE

- CHANNEL I (HARDWARE CABLE)**
- US 14 & WOODSTOCK ST
 - US 14 & GREEN OAKS/CRYSTAL LAKE AV
 - US 14 & DOLE AV
 - US 14 & McHENRY AV
 - US 14 & DEVONSHIRE LN/KEITH AV
 - US 14 & VIRGINIA RD
 - US 14 & TECKLER BLVD
 - MAIN ST & WALK-UP AV

- CHANNEL 2 (FIBER OPTIC CABLE)**
- US 14 & MAIN ST
 - US 14 & CRYSTAL POINT DR
 - US 14 & CRYSTAL COURT MALL
 - US 14 & EXCHANGE DR
 - US 14 & PINGREE RD
 - US 14 & COG CIRCLE
 - US 14 & ILL 31 WESTSIDE RAMPS
 - US 14 & ILL 31 EASTSIDE RAMPS
 - US 14 & SANDS RD

INTERCONNECT QUANTITIES

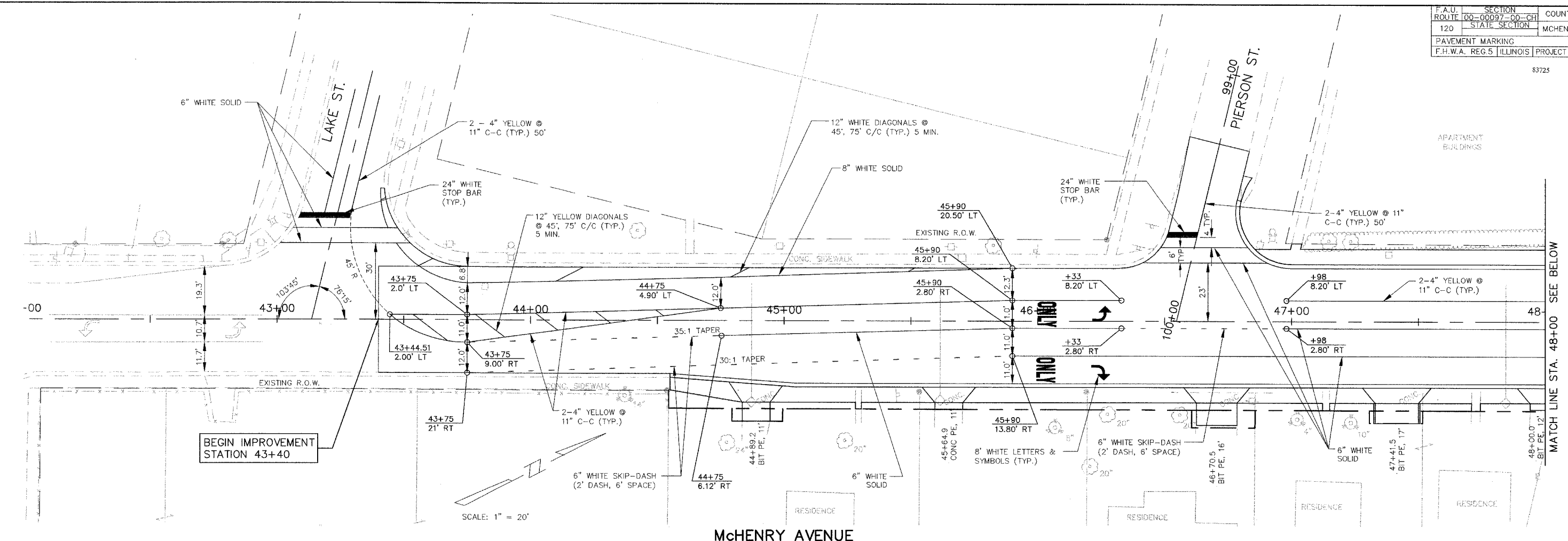
QUANTITIES	UNIT	ITEM
299	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
4613	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18 3 PAIR
32	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	DRILL EXISTING HANDHOLE
1	L SUM	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

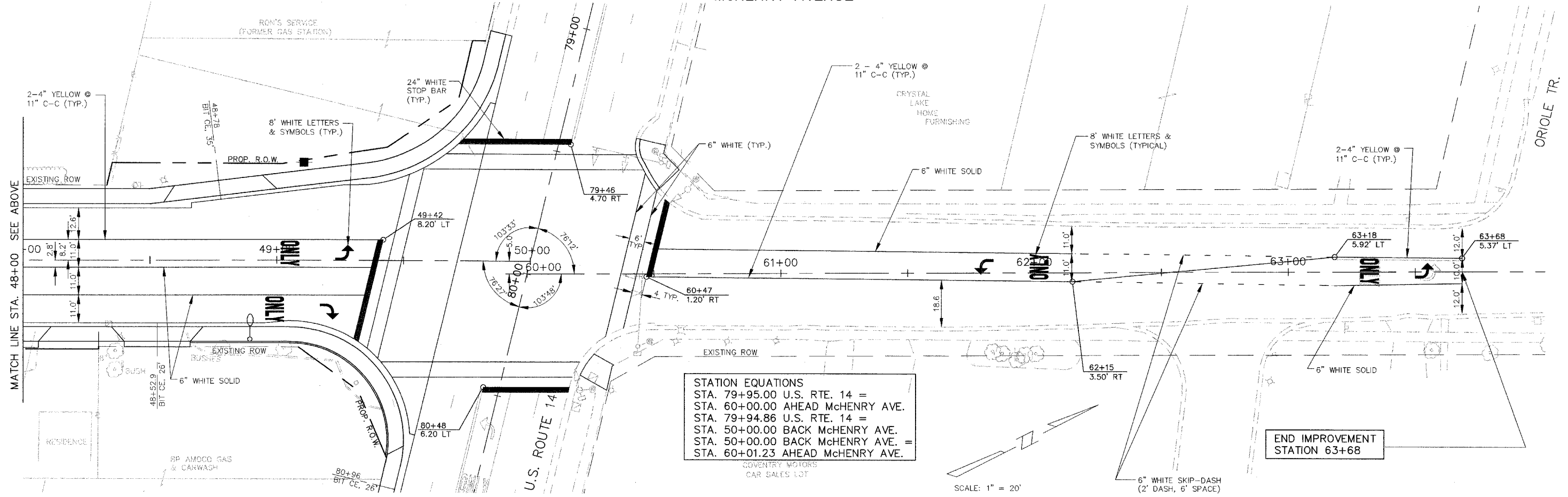
DIVISION OF TRANSPORTATION	
TRAFFIC SIGNAL SYSTEM	
INTERCONNECT MODERNIZATION	
US ROUTE 14	
(ILLINOIS 176 TO SANDS RD)	
NAME	DATE
REVISIONS	
SCALE: NONE	DRAWN BY: AC
DATE: OCT. 10, 2003	DESIGNED BY: JL
	CHECKED BY: PK

F.A.U.	SECTION	COUNTY	TOTAL SHEET
ROUTE 00-00097-00-CH	120	MCHENRY	28
PAVEMENT MARKING		PROJECT NO. F-0305(023)	18
F.H.W.A. REG 5 ILLINOIS			

83725



McHENRY AVENUE



McHENRY AVENUE

STATION EQUATIONS
 STA. 79+95.00 U.S. RTE. 14 =
 STA. 60+00.00 AHEAD McHENRY AVE.
 STA. 79+94.86 U.S. RTE. 14 =
 STA. 50+00.00 BACK McHENRY AVE.
 STA. 50+00.00 BACK McHENRY AVE. =
 STA. 60+01.23 AHEAD McHENRY AVE.

MATCH LINE STA. 48+00 SEE ABOVE

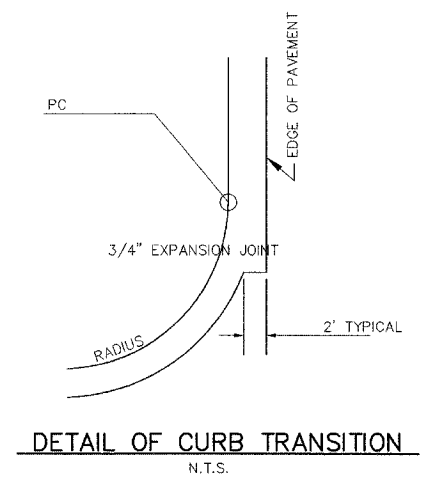
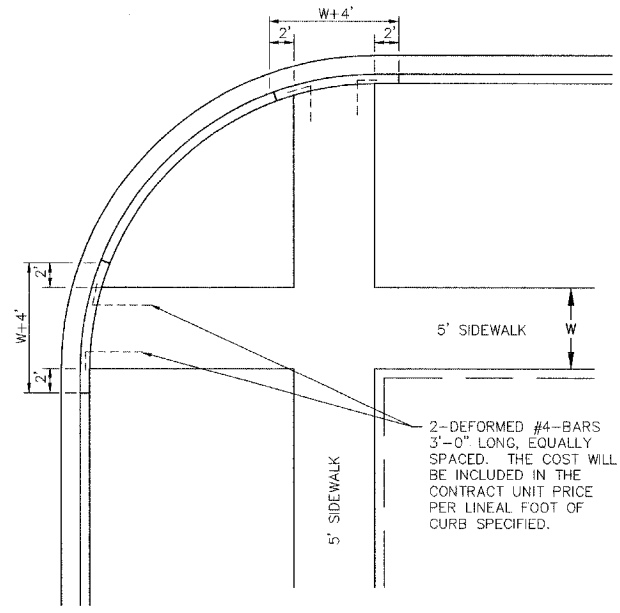
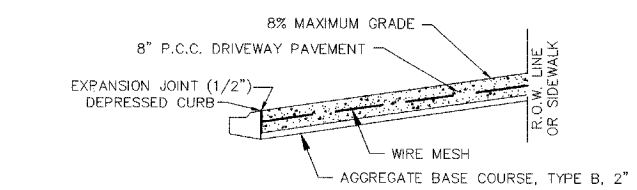
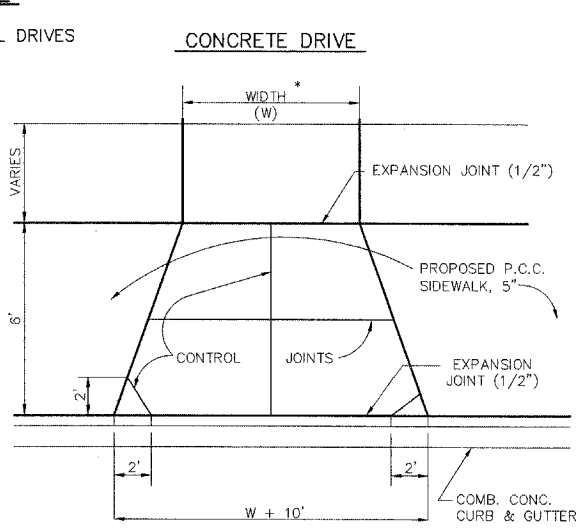
MATCH LINE STA. 48+00 SEE BELOW

SCALE: 1" = 20'

SCALE: 1" = 20'

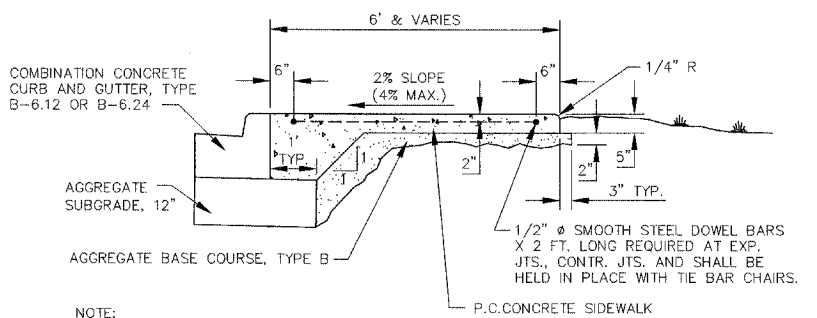
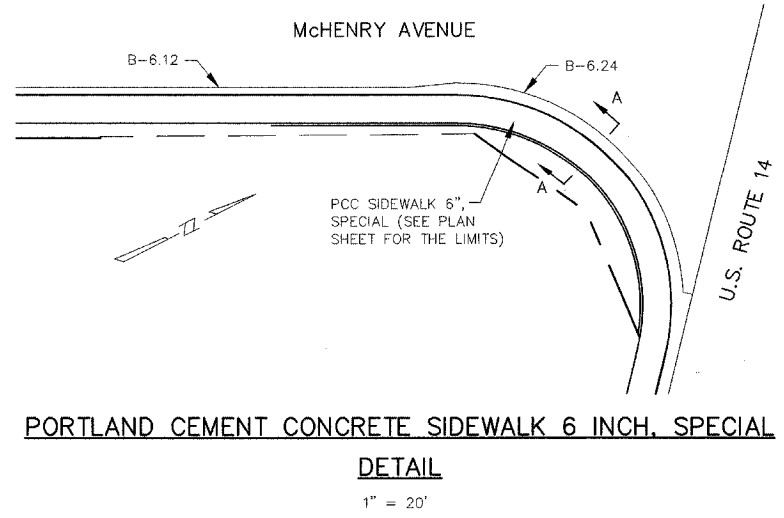
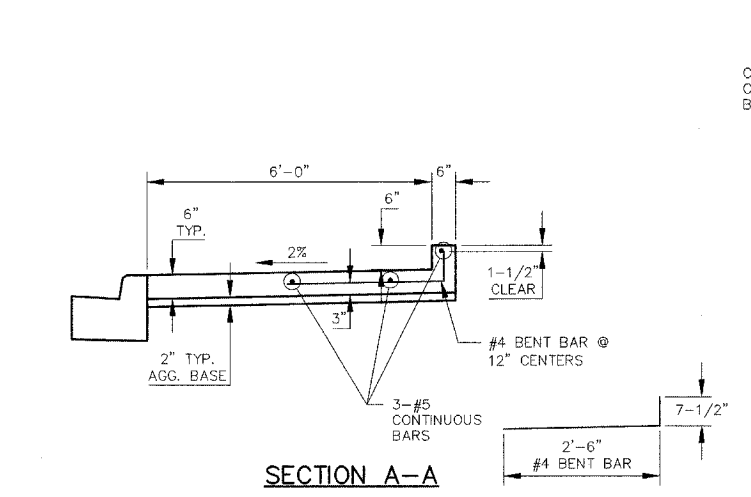
DRIVEWAY DETAIL
 (NOT TO SCALE)
 RESIDENTIAL AND COMMERCIAL DRIVES

- NOTES:
1. DRIVEWAYS SHALL BE CONSTRUCTED AS PER THE PLAN LIMITS.
 2. W IS THE DRIVEWAY WIDTH SHOWN ON THE PLANS.
 3. DRIVEWAY IS SYMMETRICAL ABOUT ITS CENTERLINE. FOR DETAILS OF CURB AND GUTTER AND SLOPES OF DRIVEWAY AND SIDEWALK, SEE CROSS SECTIONS.
 4. DRIVEWAYS SHALL BE TRANSITIONED BACK OF PROPOSED SIDEWALK, AS NECESSARY, TO EFFECT A NEGOTIABLE GRADE.
 5. CURB SHALL BE TRANSITIONED FROM BARRIER CURB TO DEPRESSED CURB IN 2'.
 6. AGGREGATE BASE COURSE, TYPE B, 2" SHALL BE INCLUDED IN THE COST OF THE 8" P.C.C. DRIVEWAY PAVEMENT.



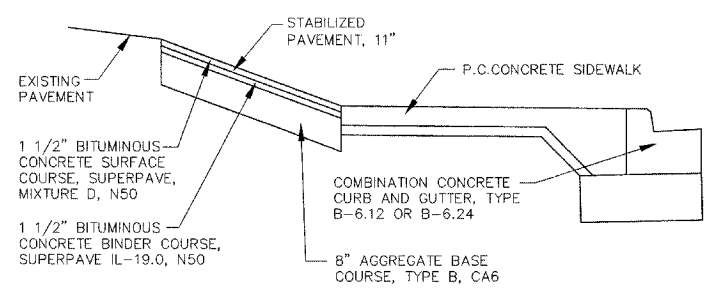
TYPICAL DEPRESSED CURB AT SIDEWALK
 RAMP DETAIL
 N.T.S.

MINIMUM DRIVEWAY WIDTH (W) IS 10'-0". IF CONCRETE DRIVE IS WIDER (W) THAN 10'-0", A CONTROL JOINT DOWN THE CENTER WILL BE REQUIRED. IF CONCRETE DRIVE IS MORE THAN 6'-0" DEPTH (D), A CONTROL JOINT ACROSS THE CENTER WILL BE REQUIRED. THE TAPER SHALL BEGIN 6'-0" BEHIND THE BACK OF CURB, AND A CONTROL JOINT WILL BE REQUIRED AT THAT POINT PARALLEL TO THE BACK OF CURB.

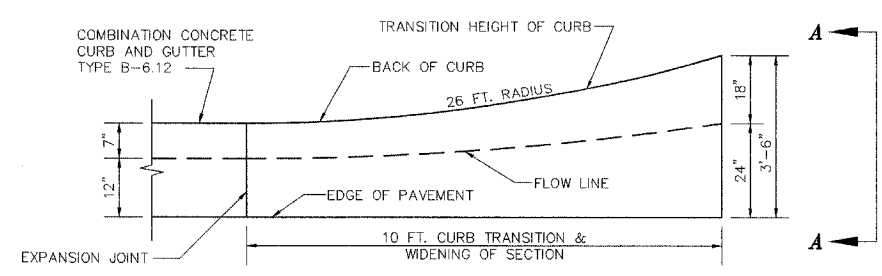


NOTE: AT ALL LOCATIONS WHERE THE SIDEWALK ABUTTS CURB & GUTTER SECTIONS, THE SIDEWALK SHALL BE POURED FULL DEPTH TO THE AGGREGATE SUBGRADE.

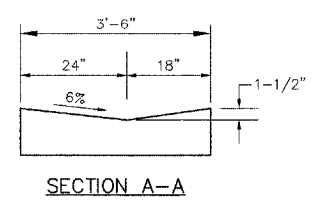
SIDEWALK DETAIL
 N.T.S.



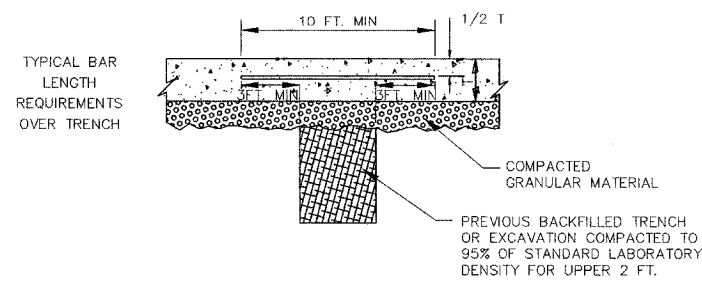
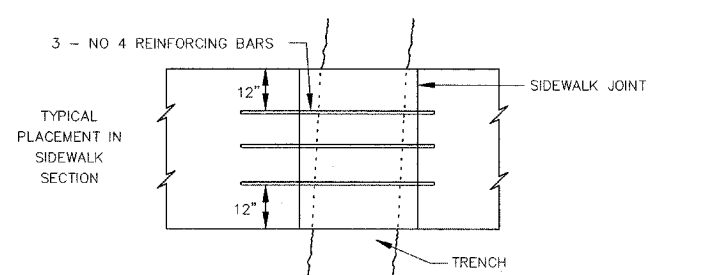
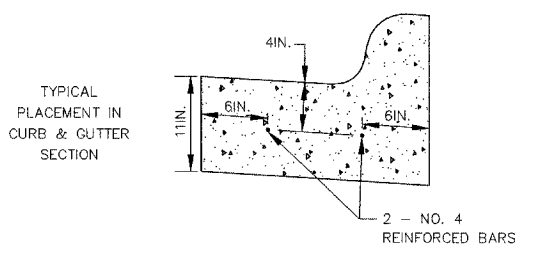
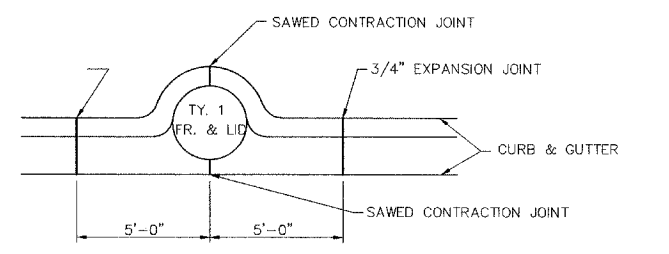
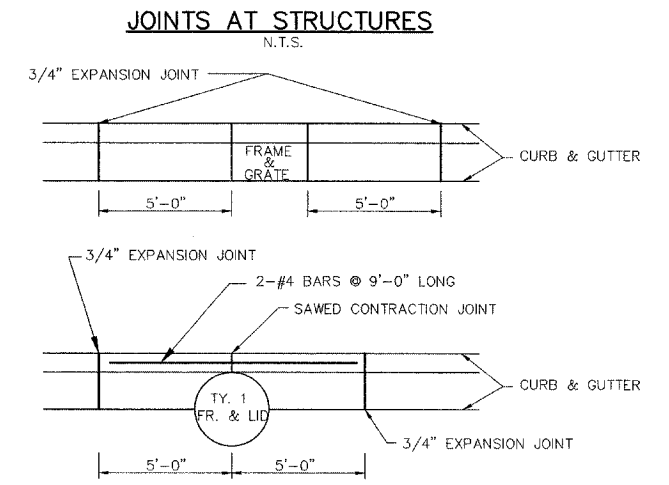
STABILIZED PAVEMENT, 11" DETAIL
 N.T.S.



CURB INLET/OUTLET DETAIL
 NOT TO SCALE



NOTE: CURB TRANSITION SHALL NOT BE PAID FOR SEPARATELY BUT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT FOR COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12.



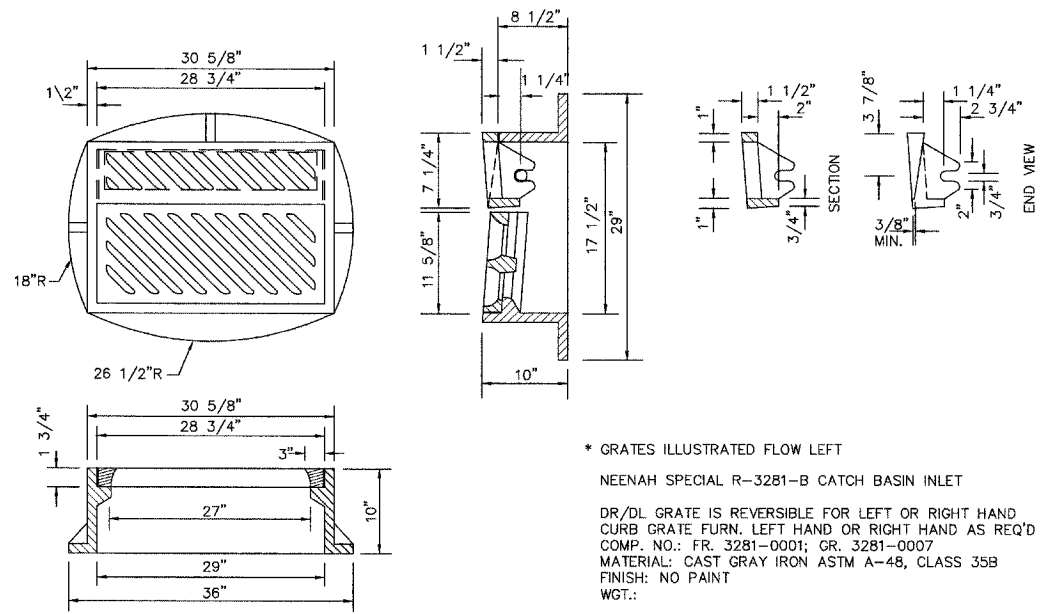
REINFORCING CURB & GUTTER OR SIDEWALK INSTALLED OVER TRENCH
 N.T.S.

CITY OF CRYSTAL LAKE WATER MAIN CHLORINATION SPECIFICATIONS

- DISINFECTION OF WATER MAINS SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION.
- THE CITY ENGINEERING AND WATER DEPARTMENTS SHALL BE NOTIFIED 48 HOURS IN ADVANCE FOR SCHEDULING OF ANY TESTING, CHLORINATING, FLUSHING, OR SAMPLING.
- ONLY CITY WATER DEPARTMENT PERSONNEL MAY OPERATE WATER VALVES ON LIVE MAINS.
- THE CITY WATER DEPARTMENT OPTS TO TAKE THEIR OWN SET OF SAMPLES SIMULTANEOUSLY WITH THE CHLORINATING CONTRACTOR. THEREFORE SAMPLING TIMES WILL BE SCHEDULED MONDAY THROUGH THURSDAY FROM 8:30-11:00 A.M. ONLY.
- A WATER VALVE JUMPER IS REQUIRED TO MAINTAIN PRESSURE ON THE CHLORINATED LINES DURING THE SAMPLING PROCEDURE. FOR PROPER INSTALLATION AND REQUIREMENTS SEE THE STANDARD WATER VALVE JUMPER DETAIL.
- WATER MAINS SHALL BE FLUSHED WITH A MINIMUM VELOCITY OF 2.5 FPS.
- THE INITIAL CHLORINE CONCENTRATION SHALL BE 50 mg/L WITH A MIN. 24 HOUR RESIDUAL OF 25 mg/L.
- THE METHOD OF CHLORINE APPLICATION SHALL BE APPROVED BY THE CITY ENGINEER.
 - LIQUID CHLORINE W/CHLORINATING DEVICE WITH BACKFLOW PREVENTER.
 - CHLORINE BEARING COMPOUNDS IN WATER.
 - TABLET DISINFECTION.
- ALL NEW VALVES AND HYDRANTS SHALL BE OPERATED WHILE LINE IS BEING CHLORINATED.
- THE CITY WATER DEPARTMENT SHALL DETERMINE LOCATION AND QUANTITY OF CORPORATION STOPS FOR FLUSHING AND CHLORINATING.
- THE FINAL FLUSHING RESIDUAL IN THE NEW CHLORINATED LINES SHALL BE BETWEEN 0.2 AND 1.1 mg/L.
- ALL WATER SAMPLES SHALL BE COLLECTED ON TWO (2) CONSECUTIVE DAYS AND PASS BACTERIOLOGICAL TEST RESULTS. IN THE EVENT THAT THE FIRST SET OF SAMPLES TAKEN TWO (2) CONSECUTIVE DAYS APART FAIL TO PASS, ANOTHER SET OF SAMPLES MAY BE TAKEN TWO (2) DAYS APART (PER STATE SPECIFICATIONS). IF THE SECOND SET FAILS TO PASS TESTING, THEN THE PROCEDURE MUST BE REPEATED WITH THE MAIN BEING RECHLORINATED, REFLUSHED, AND RESAMPLED.

F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS
120	60-00097-00-CH	MCHENRY	28
SPECIAL DETAILS			20
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F-0305(023)			

83725



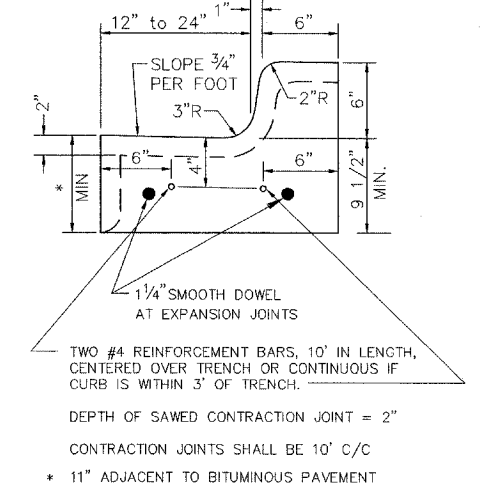
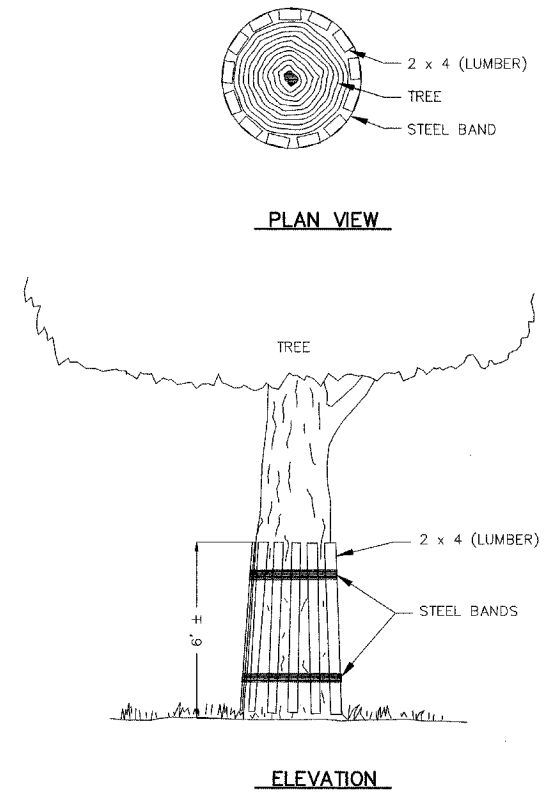
FRAME AND GRATE, TYPE II, SPECIAL

CHLORINE REQUIREMENTS TO PRODUCE 50 mg/L CONCENTRATION IN 100 FEET OF PIPE-BY DIAMETER

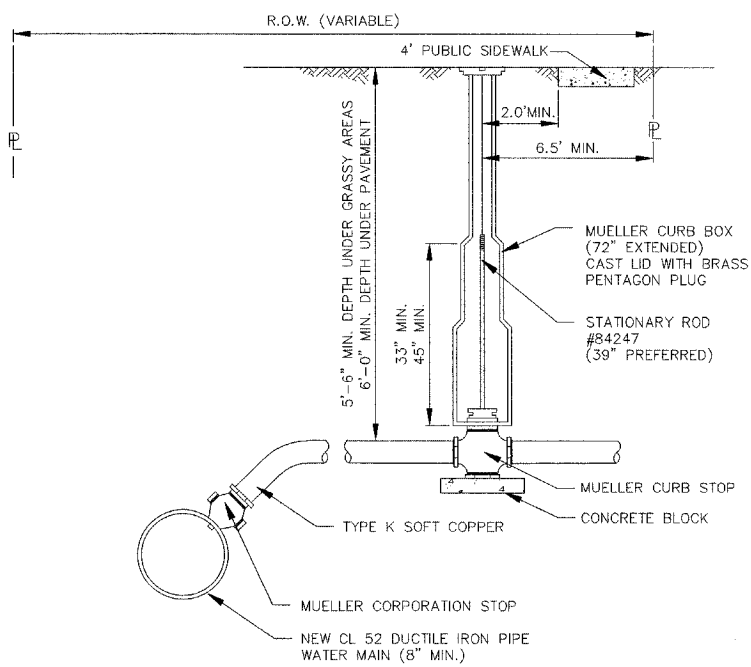
PIPE SIZE IN INCHES	100% CHLORINE, LB.	1% CHLORINE SOLUTION, GALS.
4	0.027	1.249
6	0.061	2.763
8	0.108	4.921
10	0.170	7.721
12	0.240	10.901

NUMBER OF 5-GRAIN HYPOCHLORITE TABLETS REQUIRED FOR A DOSAGE OF 50 mg/L PER LENGTH OF PIPE SECTION

PIPE SIZE IN INCHES	LENGTH OF PIPE SECTION IN FEET				
	UP TO 4	5.5	6	9	12
50	1	1	1	1	1
100	1	1	2	2	2
150	2	2	3	3	4
200	2	3	5	5	6
250	3	5	7	7	9
300	5	6	10	10	14



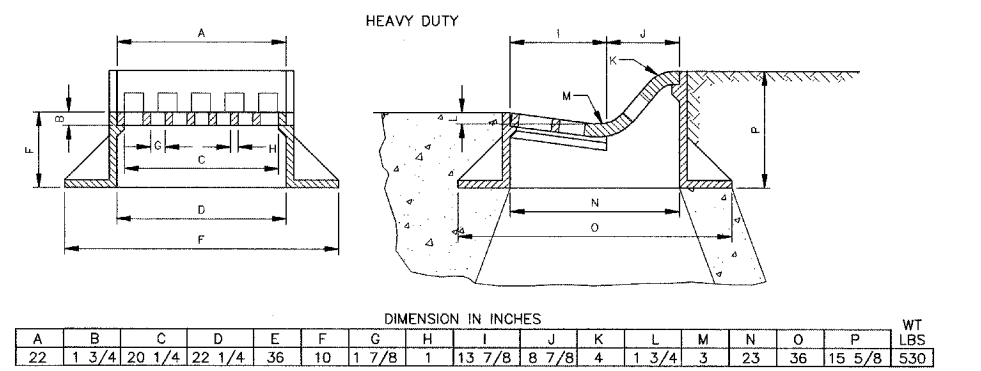
SAWED CONTRACTION JOINT DETAIL



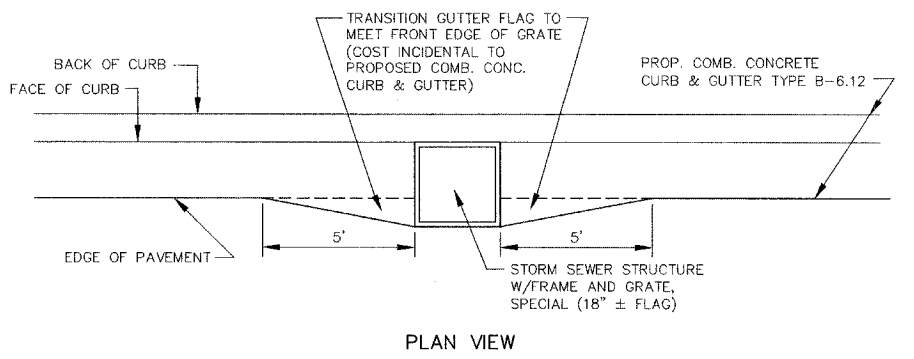
PART DESCRIPTION	MUELLER CAT. NO.	SERVICE SIZE	MAIN SIZE	INLET			OUTLET		
				AWWA TAPER	COMP	FLARE	AWWA TAPER	COMP	FLARE
CORP STOP	H-15000	3/4"-2"	6"+	X					X
	H-15008	3/4"-1"	8"+	X				X	
DOUBLE STRAP BRASS SERVICE SADDLE	H-16123	1 1/2"-2"	4"				X		
	H-16126	1 1/4"-2"	6"				X		
	H-16130	1 1/4"-2"	8"				X		
	H-16134	1 1/2"-2"	10"				X		
CURB STOP	H-16137	1 1/4"-2"	12"				X		
	H-15150	3/4"-1"			X				X
CURB BOX	H-15154	1 1/4"-2"			X				X
	H-15155	3/4"-1"		X				X	
	H-10300 H-10300-99002	3/4"-1 1/2" 2"							

WATER SERVICE INSTALLATION

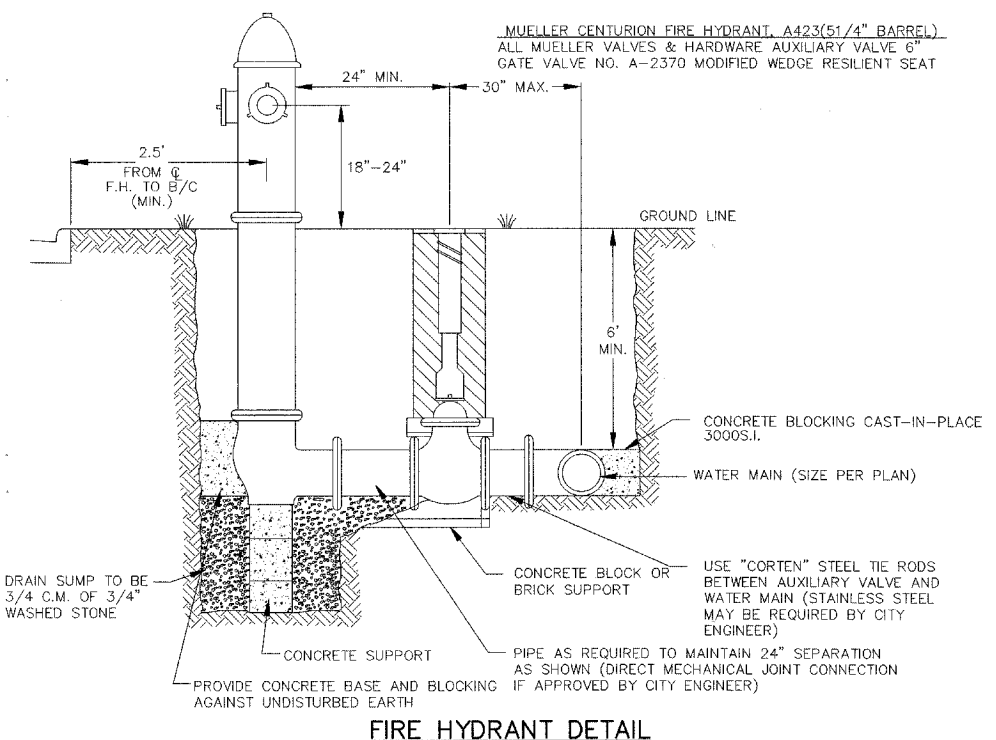
NEENAH R-3502-A OR EQUAL



FRAME AND GRATE, SPECIAL



GUTTER FLAG DETAIL AT FRAME & GRATE, SPECIAL

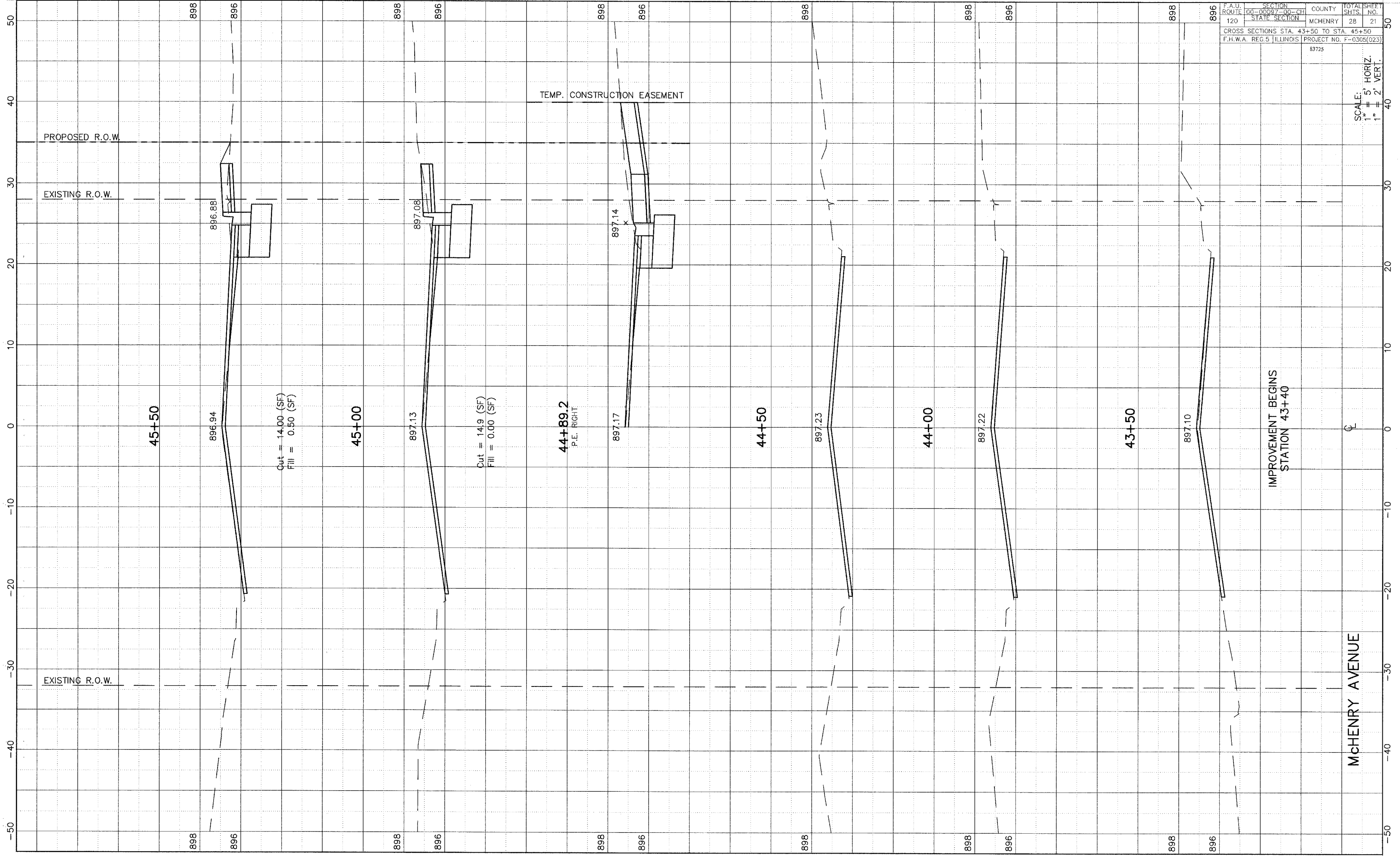


- NOTES
- NO CORPORATION STOPS, COPPER SERVICE, OR CURB BOXES MAY BE LOCATED UNDER PAVED AREAS INCLUDING DRIVES AND SIDEWALKS.
 - ALL WATER MAIN HARDWARE SHALL BE MUELLER.
 - SERVICE TO BE CONTINUOUS WITHOUT JOINTS FROM CORPORATION STOP TO CURB STOP.
 - MULTIPLE TAPS INTO MAIN SHALL BE NO CLOSER THAN 2' APART.
 - TRENCH FROM MAIN TO BACK OF SIDEWALK TO BE COMPACTED TRENCH BACKFILL.

F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEETS
120	00-00097-00-CH	MCHENRY	28
	STATE SECTION		21

CROSS SECTIONS STA. 43+50 TO STA. 45+50
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F-0305(023)
83725

SCALE: 1" = 5' HORIZ.
1" = 2' VERT.

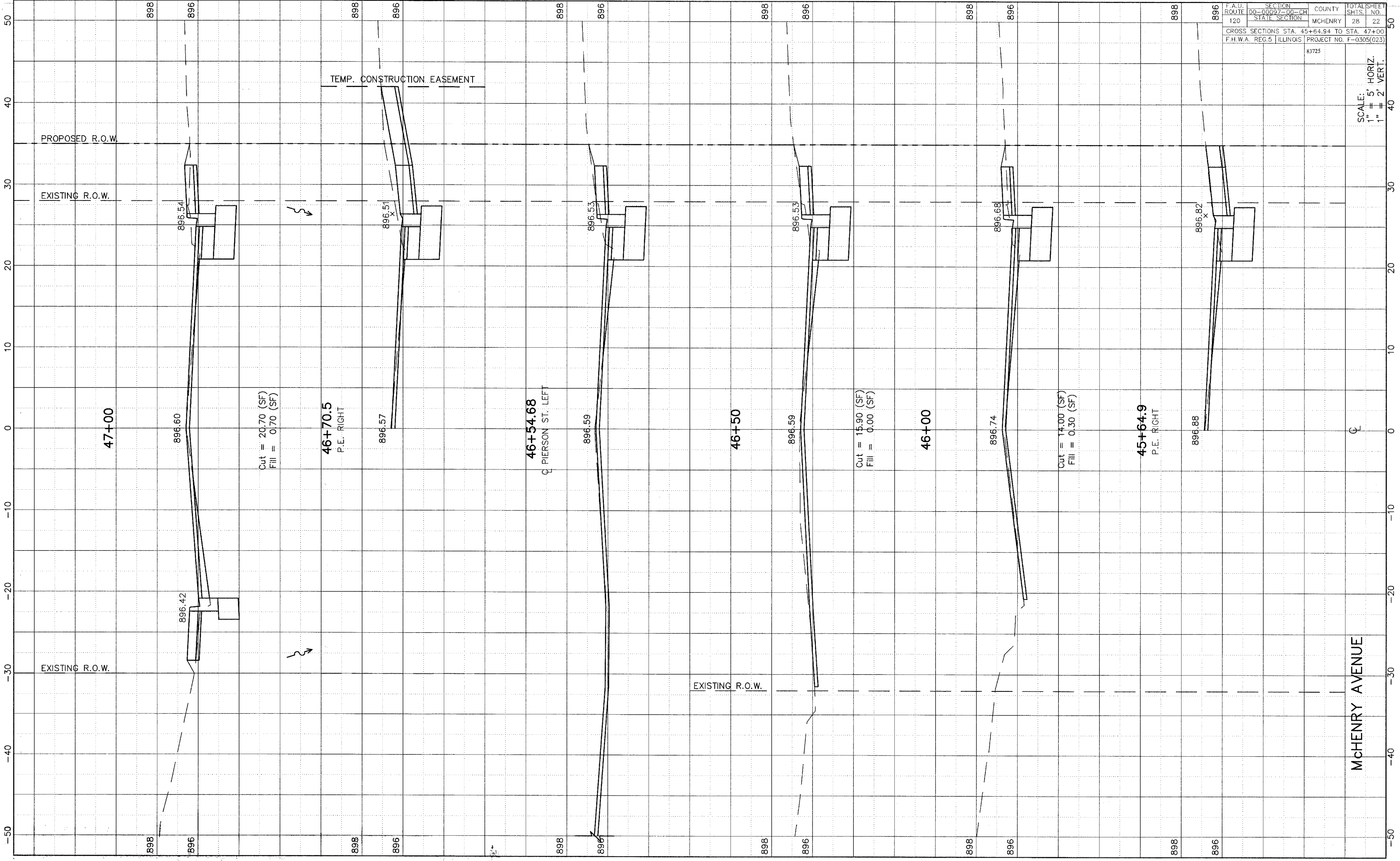


IMPROVEMENT BEGINS
STATION 43+40

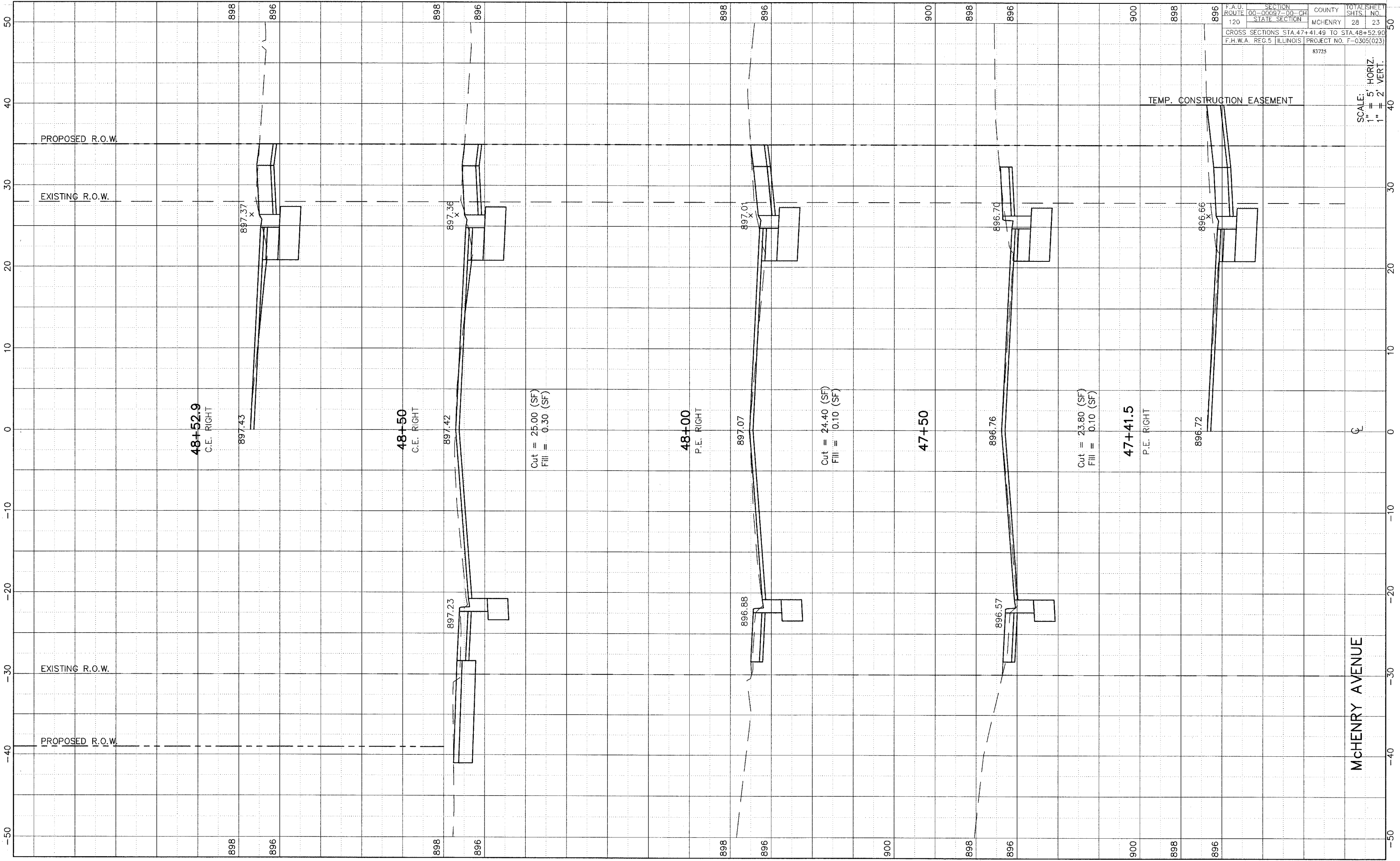
MCHENRY AVENUE

F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEET
120	00-00097-00-CH	MCHENRY	SHTS. NO.
	STATE SECTION		28 22
CROSS SECTIONS STA. 45+64.94 TO STA. 47+00			
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F-0305(023)			
83725			

SCALE:
1" = 5' HORIZ.
1" = 2' VERT.



F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEET
120	00-00097-00-CH	MCHENRY	28
	STATE SECTION		NO.
			23
CROSS SECTIONS STA.47+41.49 TO STA.48+52.90			
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F-0305(023)			
83725			



48+52.9
C.E. RIGHT

48+50
C.E. RIGHT

Cut = 25.00 (SF)
Fill = 0.30 (SF)

48+00
P.E. RIGHT

Cut = 24.40 (SF)
Fill = 0.10 (SF)

47+50

Cut = 23.80 (SF)
Fill = 0.10 (SF)

47+41.5
P.E. RIGHT

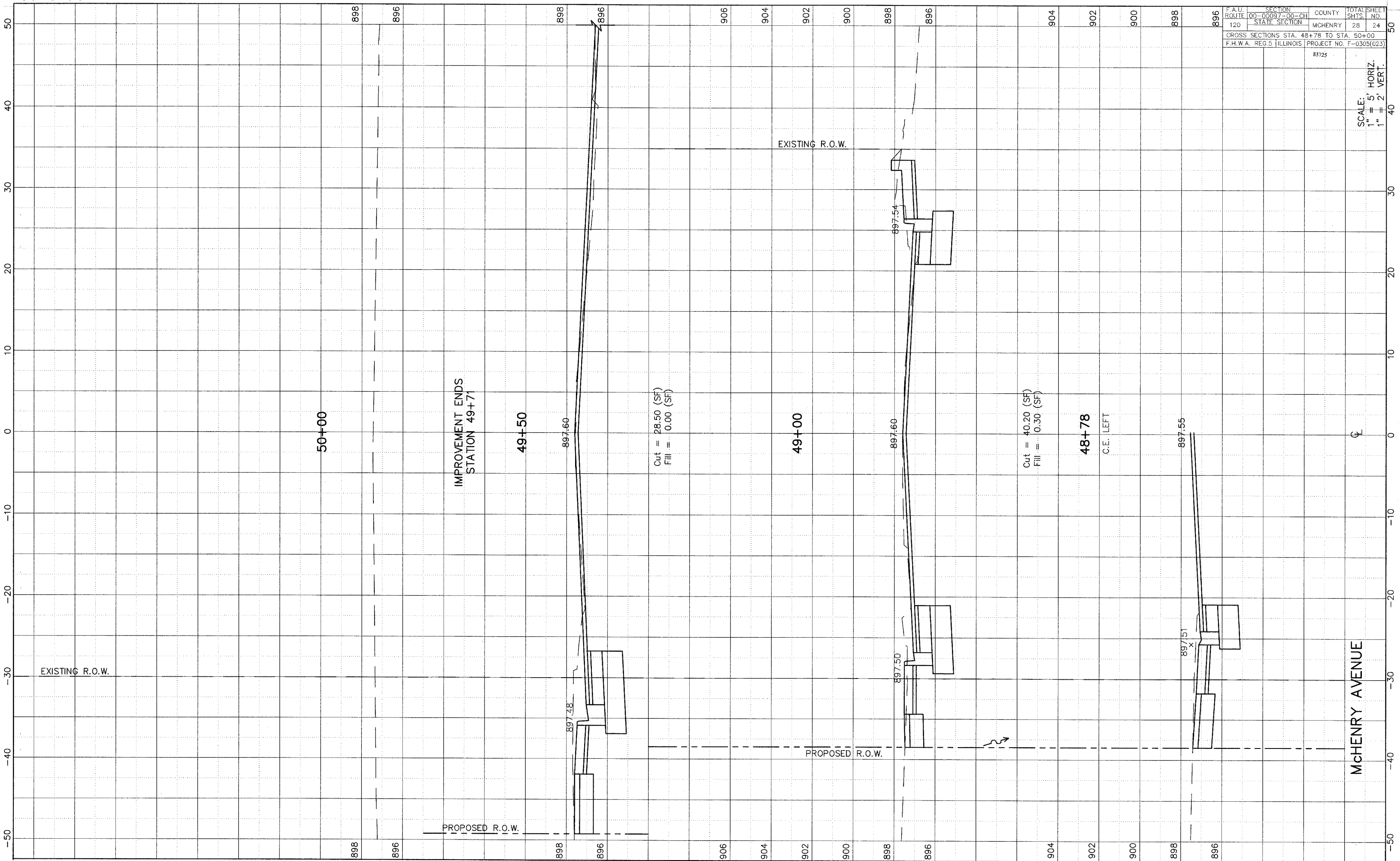
McHENRY AVENUE

C

SCALE:
1" = 5' HORIZ.
1" = 2' VERT.

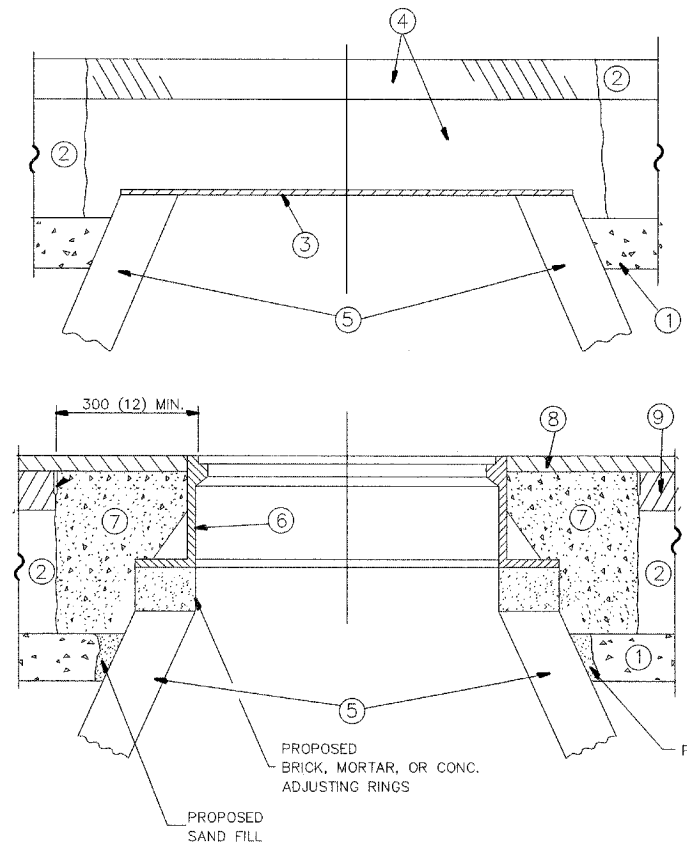
F.A.U. ROUTE	SECTION	COUNTY	TOTAL SHEET
120	00-0097-00-CH	MCHENRY	28
	STATE SECTION		NO. 24
CROSS SECTIONS STA. 48+78 TO STA. 50+00			
F.H.W.A. REG. 5 ILLINOIS PROJECT NO. F-0305(023)			
83725			

SCALE:
1" = 5' HORIZ.
1" = 2' VERT.



F.A.U. ROUTE	SECTION 00-00097-00-CH	COUNTY	TOTAL SHEET
120	STATE SECTION	MCHENRY	28
TYP APPLICATION OF TRAFFIC CONTROL DEVICES			NO. 25
F.H.W.A. REG.5 ILLINOIS PROJECT NO. F--0305(023)			

83725



CONSTRUCTION PROCEDURES

- STAGE 1 (BEFORE PAVEMENT MILLING)**
- A) REMOVE A MINIMUM OF 300 (12) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
 - B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE.
 - C) COVER THE STRUCTURE OPENING WITH A 900 (36) DIAMETER METAL PLATE.
 - D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 40 (1 1/2) THICK BITUMINOUS MATERIAL APPROVED BY THE ENGINEER.
- STAGE 2 (AFTER PAVEMENT MILLING)**
- A) REMOVE THE BITUMINOUS MATERIAL AND CRUSHED STONE.
 - B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
 - C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS SI CONCRETE, OR BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS.

LEGEND

- ① SUB-BASE GRANULAR MATERIAL
- ② EXISTING PAVEMENT
- ③ 900 (36) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND BITUMINOUS MATERIAL
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS SI CONCRETE, BITUMINOUS CONCRETE SURFACE OR BINDER COURSE MATERIAL
- ⑧ PROPOSED BITUMINOUS CONCRETE SURFACE COURSE
- ⑨ PROPOSED BITUMINOUS CONCRETE BINDER COURSE

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.

CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE RECONSTRUCTION PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

BASIS OF PAYMENT: FRAMES AND LIDS TO BE ADJUSTED, SPECIAL EACH
 NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

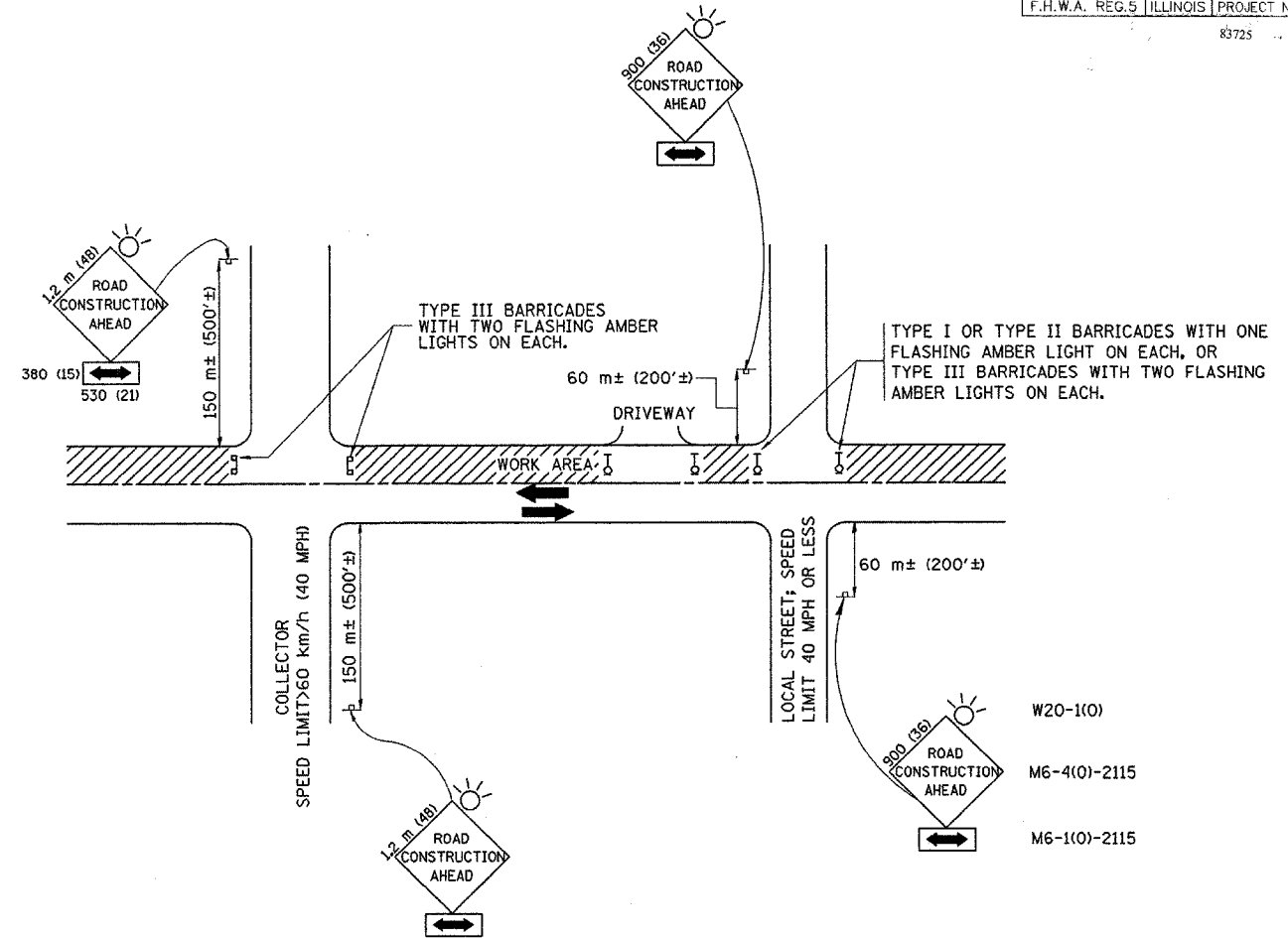
DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN

REVISIONS	
NAME	DATE
R. SHAH	10/25/94
R. SHAH	01/30/95
R. SHAH	03/10/95
A. ABBAS	03/21/97

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DETAILS FOR
 FRAMES AND LIDS ADJUSTMENT
 WITHOUT MILLING
 AND
 FRAMES AND LIDS ADJUSTMENT
 WITH MILLING

SCALE: NONE
 DATE: \$\$\$DATE\$\$
 DRAWN BY
 CHECKED BY



W20-1(0)
M6-4(0)-2115
M6-1(0)-2115

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

NOTES:

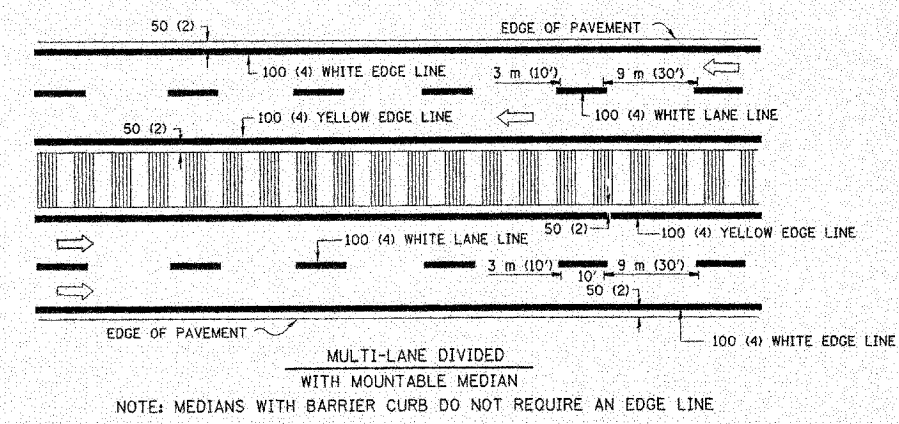
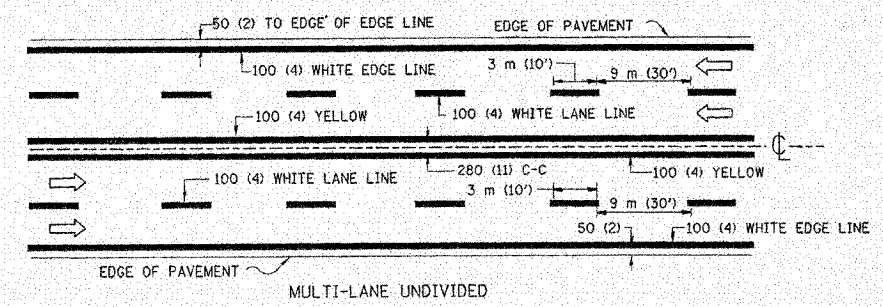
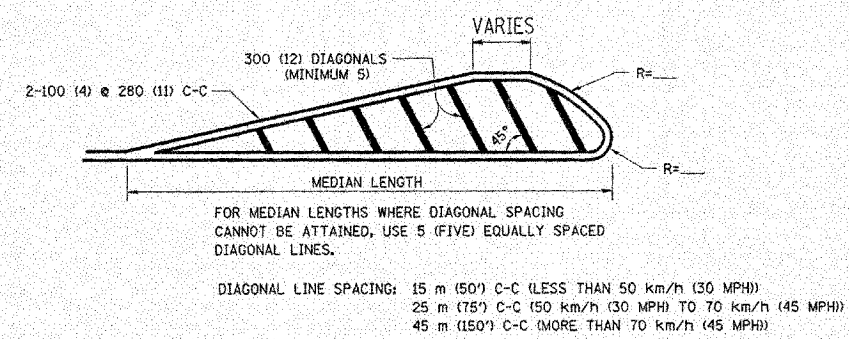
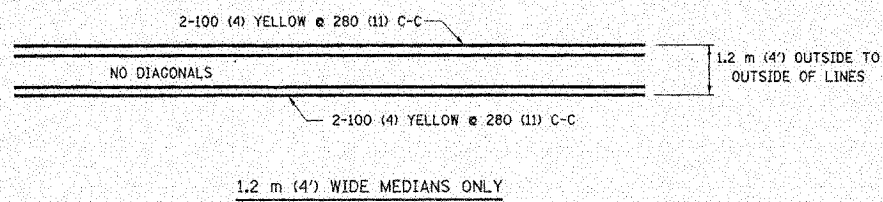
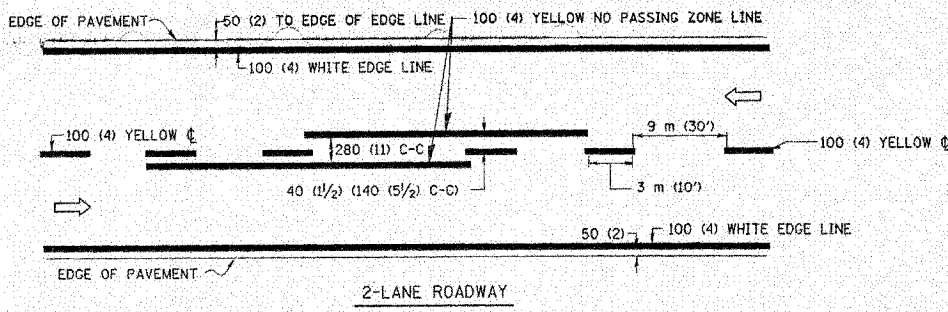
- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS**
- SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 900x366 WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE **ROAD CONSTRUCTION AHEAD** SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR 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.**

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

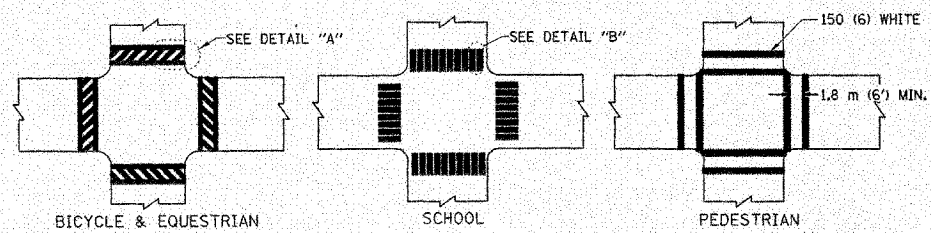
ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL AND PROTECTION
FOR
SIDE ROADS, INTERSECTIONS, AND
DRIVEWAYS

SCALE: VERT.
HORIZ.
DATE 05/29/2003

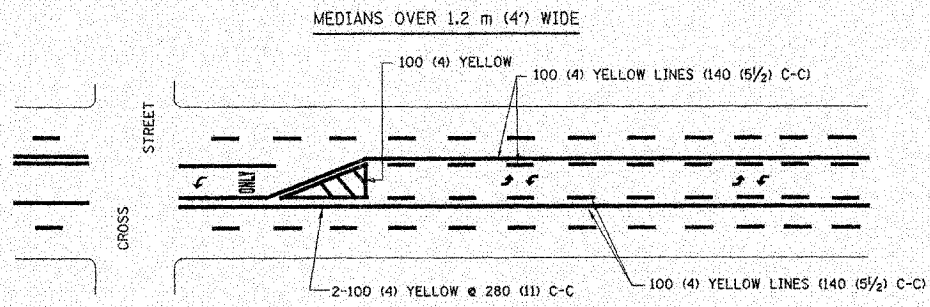
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TC-10



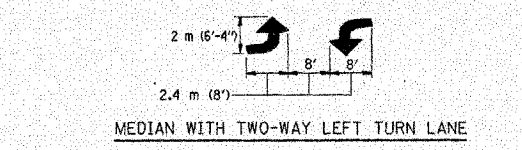
TYPICAL LANE AND EDGE LINE MARKING



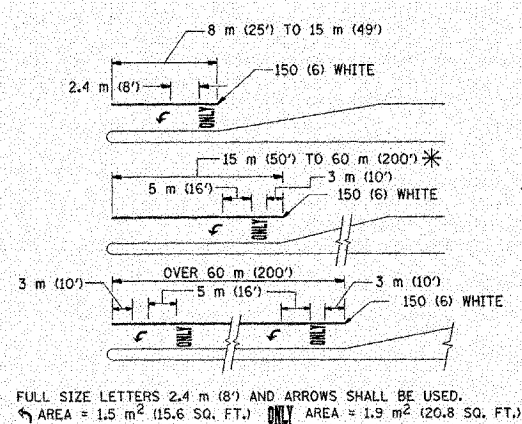
TYPICAL CROSSWALK MARKING



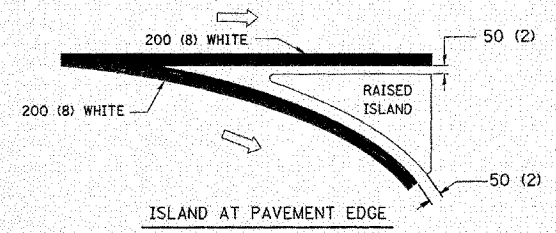
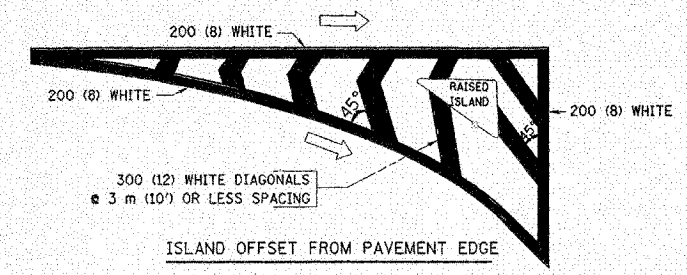
TYPICAL PAINTED MEDIAN MARKING



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	100 (4)	SKIP-DASH	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION	100 (4)	SOLID	YELLOW	140 (5 1/2) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES: FOR BOTH DIRECTIONS	2 @ 100 (4)	SOLID	YELLOW	280 (11) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	100 (4)	SKIP-DASH SKIP-DASH	WHITE WHITE	3 m (10') LINE WITH 9 m (30') SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	600 (2') LINE WITH 1.8 m (6') SPACE
EDGE LINES	100 (4)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	150 (6) LINE; FULL SIZE LETTERS & SYMBOLS (2.4 m (8'))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 100 (4) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	3 m (10') LINE WITH 9 m (30') SPACE FOR SKIP-DASH; 140 (5 1/2) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	2.4 m (8') LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN)	2 @ 150 (6)	SOLID	WHITE	NOT LESS THAN 1.8 m (6') APART
A. DIAGONALS (BIKE & EQUESTRIAN)	300 (12) @ 45°	SOLID	WHITE	600 (2') APART
B. LONGITUDINAL BARS (SCHOOL)	300 (12) @ 90°	SOLID	WHITE	SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	600 (24)	SOLID	WHITE	PLACE 1.2 m (4') IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 100 (4) WITH 300 (12) DIAGONALS @ 45°	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	280 (11) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	200 (8) WITH 300 (12) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 4.5 m (15') C-C (LESS THAN 50 km/h (30 MPH)) 6 m (20') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 9 m (30') C-C (OVER 70 km/h (45 MPH))
RAILROAD CROSSING	600 (24) TRANSVERSE LINES; "RR" IS 1.8 m (6') LETTERS; 400 (16) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=0.33m ² (3.6 SQ. FT.) EACH "X"=5.0 m ² (54.0 SQ. FT.)
SHOULDER DIAGONALS	300 (12) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	15 m (50') C-C (LESS THAN 50 km/h (30 MPH)) 25 m (75') C-C (50 km/h (30 MPH) TO 70 km/h (45 MPH)) 45 m (150') C-C (OVER 70 km/h (45 MPH))

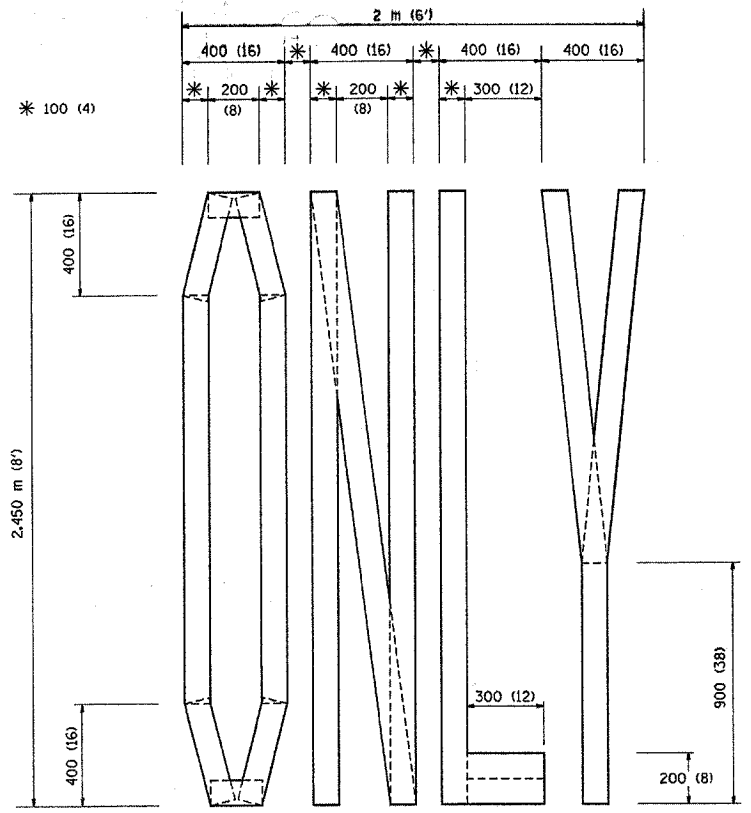
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

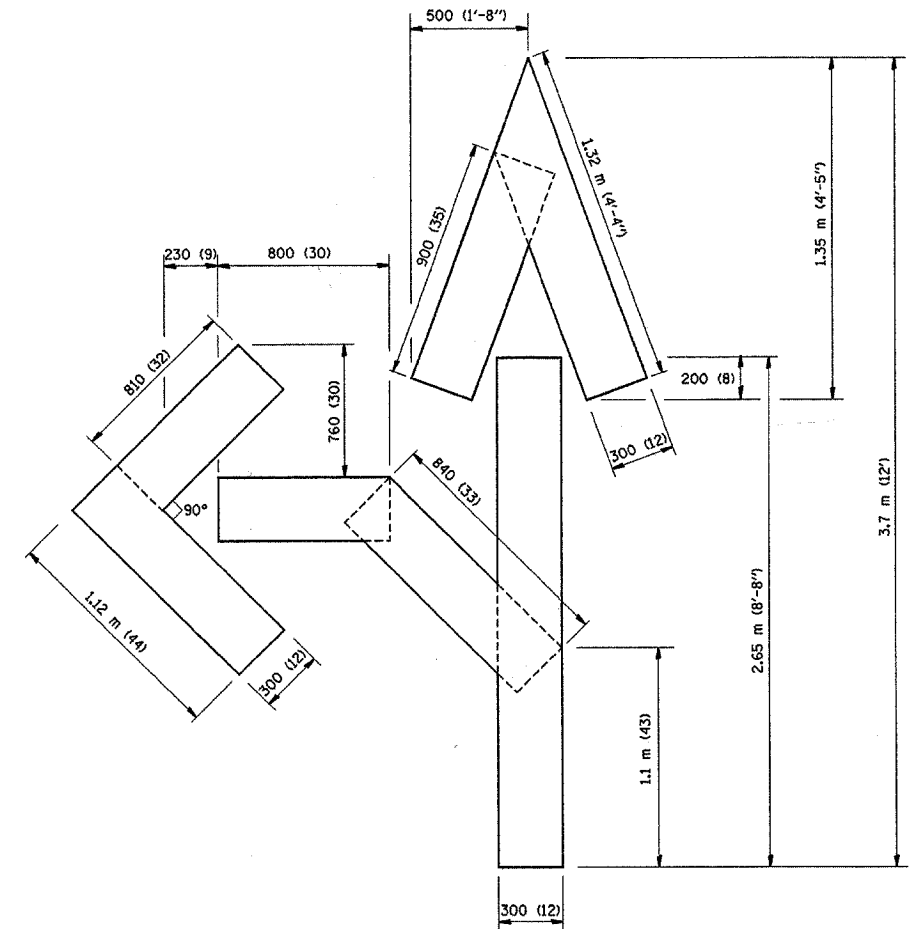
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
TYPICAL PAVEMENT
MARKINGS

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

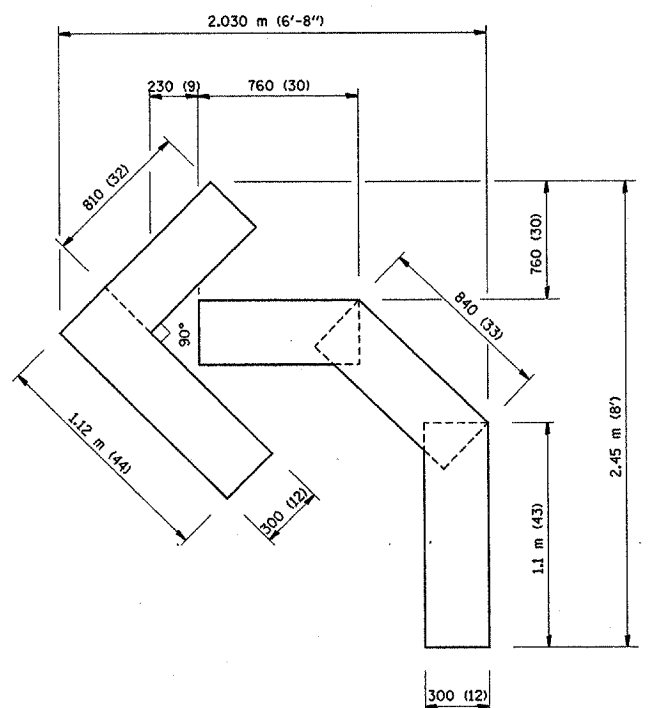
SCALE: NONE
DATE 05/29/2003
DRAWN BY CADD
CHECKED BY
TC-13



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



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



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

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING LETTERS AND SYMBOLS FOR TRAFFIC STAGING

REVISIONS	
NAME	DATE
T. RAMMACHER	09/18/94
J. OBERLE	06/01/96
T. RAMMACHER	06/05/96
T. RAMMACHER	11/04/97
T. RAMMACHER	03/02/98
E. GOMEZ	08/28/00

SCALE: NONE
DATE 05/29/2003

DRAWN BY CADD
CHECKED BY TC-16