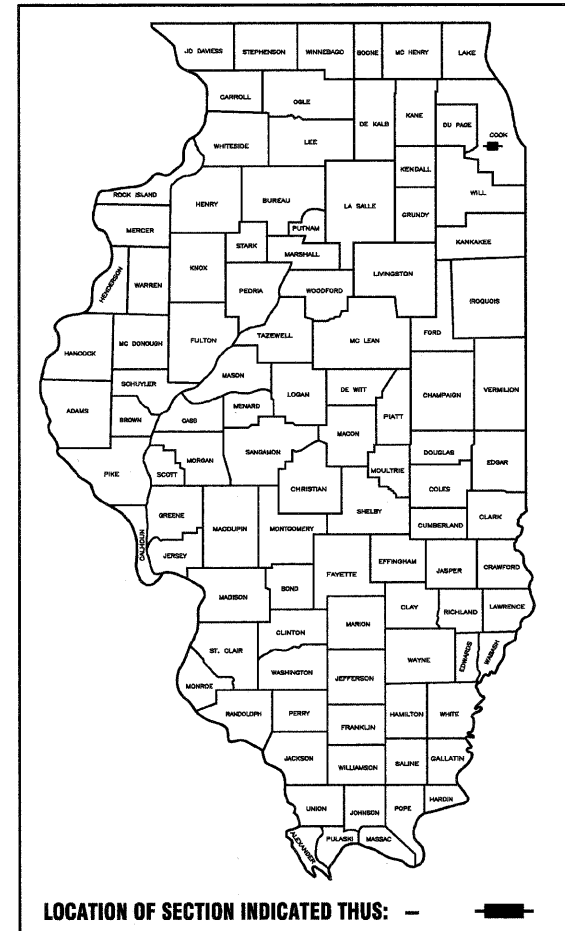


FAP RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-SW	COOK	29	1
F.H.W.A. REG.	ILLINOIS	PROJECT:	ARA-9003(385)	
CONTRACT NO. 63413				

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID PROJECT

**FAP 0348 HARLEM AVENUE - 119TH STREET TO 131ST STREET  
FAU 1587 McCARTHY ROAD - 76TH AVENUE TO 123RD STREET  
FAU 1596 135TH STREET - EXISTING SIDEWALK AT RIDGELAND AVENUE TO  
FOREST PRESERVE BIKE PATH  
SIDEWALK  
SECTION NO.: 09-00044-00-SW  
PROJECT NO. ARA-9003(385)  
JOB NO. C-91-771-09  
CITY OF PALOS HEIGHTS  
COOK COUNTY**

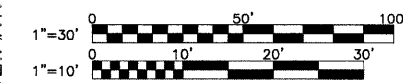


- ### INDEX OF SHEETS
- 1.) COVER SHEET, INDEX TO SHEETS, LOCATION MAP, INDEX OF STANDARDS
  - 2.) SUMMARY OF QUANTITIES
  - 3.) GENERAL NOTES
  - 4.) TYPICAL SECTIONS
  - 5.) PLAN - HARLEM AVENUE - 131ST ST. TO ISHNALA DR.
  - 6.) PLAN - HARLEM AVENUE - ISHNALA DR. TO 127TH ST.
  - 7.) PLAN - HARLEM AVENUE AT 123RD ST.
  - 8.) PLAN - HARLEM AVENUE - 119TH PLACE TO BRIDGE
  - 9.) PLAN - McCARTHY ROAD - OAKRIDGE DR. TO DIANE DR.
  - 10.) PLAN - 135TH STREET WEST OF RIDGELAND AVE.
  - 11.) CROSS SECTIONS - HARLEM AVENUE
  - 12.) CROSS SECTIONS - HARLEM AVENUE
  - 13.) CROSS SECTIONS - McCARTHY ROAD
  - 14.) CROSS SECTIONS - 135TH STREET
  - 15.) HARLEM AVENUE & 131ST STREET - TRAFFIC SIGNAL MODIFICATIONS  
HARLEM AVENUE & 131ST STREET
  - 16.) - SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION
  - 17.) HARLEM AVENUE & 123RD STREET - TRAFFIC SIGNAL MODIFICATIONS  
HARLEM AVENUE & 123RD STREET
  - 18.) - SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION
  - 19.) HARLEM AVENUE & 119TH STREET - TRAFFIC SIGNAL MODIFICATIONS
  - 20.) HARLEM AVENUE & 119TH STREET  
- CABLE PLAN, SCHEDULE OF QUANTITIES
  - 21.-26.) DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
  - 27.) DETAIL SHEET
  - 28.) DETAIL SHEET - BD-24
  - 29.) DETAIL SHEET - TC-13

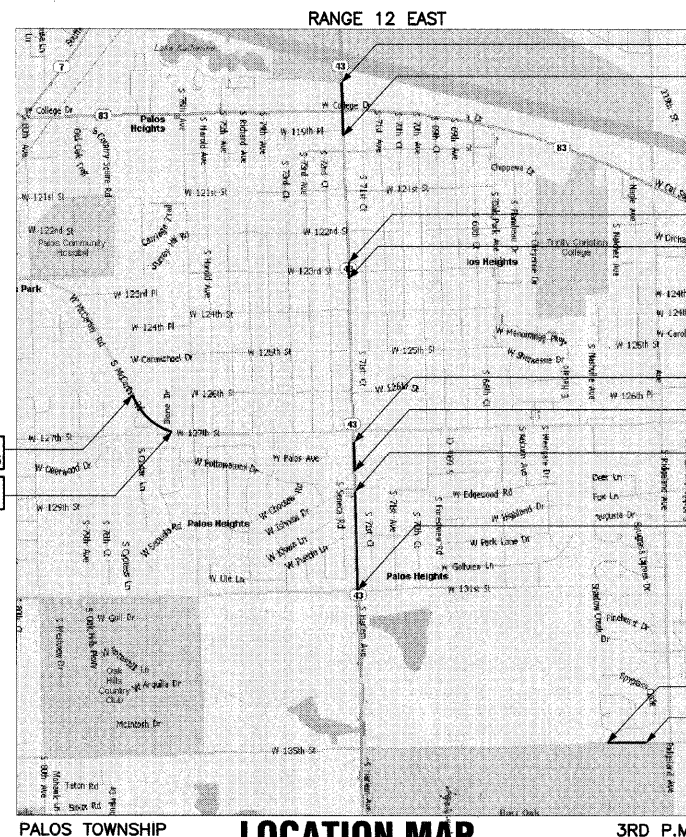
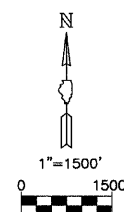
### LIST OF ILLINOIS DOT HIGHWAY STANDARDS

- |           |  |
|-----------|--|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS                    |
| 280001-05 | TEMPORARY EROSION CONTROL SYSTEMS                                |
| 424001-05 | CURB RAMPS FOR SIDEWALKS   |
| 602011-01 | CATCH BASIN TYPE C   |
| 606001-04 | CONCRETE CURB TYPE B AND COMBINATION<br>CONCRETE CURB & GUTTER   |
| 631011-06 | TRAFFIC BARRIER TERMINAL, TYPE 2                                 |
| 701006-03 | OFF ROAD OPERATIONS  |
| 701301-03 | LANE CLOSURE - SHORT OPERATIONS                                  |
| 701501-05 | URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED                            |
| 701801-04 | LANE CLOSURE MULTILANE 1W OR 2W<br>CROSSWALK OR SIDEWALK CLOSURE |
| 701901-01 | TRAFFIC CONTROL DEVICES  |

- SCALES
- |                       |                  |
|-----------------------|------------------|
| PLAN                  | 1 INCH = 30 FEET |
| PROFILE HORIZ.        | 1 INCH = 30 FEET |
| PROFILE VERT.         | 1 INCH = 5 FEET  |
| CROSS-SECTIONS HORIZ. | 1 INCH = 10 FEET |
| CROSS-SECTIONS VERT.  | 1 INCH = 5 FEET  |



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.



BEGIN IMPROVEMENT  
McCARTHY AVE. STA. 27+36  
END IMPROVEMENT  
McCARTHY AVE. STA. 35+27

END IMPROVEMENT  
HARLEM AVE. STA. 86+78  
BEGIN IMPROVEMENT  
HARLEM AVE. STA. 76+66

END IMPROVEMENT  
HARLEM AVE. STA. 55+51  
BEGIN IMPROVEMENT  
HARLEM AVE. STA. 54+34

END IMPROVEMENT  
HARLEM AVE. STA. 26+30  
BEGIN IMPROVEMENT  
HARLEM AVE. STA. 21+63

END IMPROVEMENT  
HARLEM AVE. STA. 18+61

BEGIN IMPROVEMENT  
HARLEM AVE. STA. 1+64

BEGIN IMPROVEMENT  
135TH ST. STA. 0+50  
END IMPROVEMENT  
135TH ST. STA. 11+30

**LOCATION MAP**  
3RD P.M.

- DENOTES PROJECT LOCATION  
NET LENGTH OF PROJECT = 5164 LIN FT (0.98 MILE)  
GROSS LENGTH OF PROJECT = 5164 LIN FT (0.98 MILE)

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

APPROVED 12/18 2009

MAYOR, CITY OF PALOS HEIGHTS

PASSED DECEMBER 18 2009

REGION #1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID  
BASED ON LIMITED  
REVIEW DECEMBER 10, 2009

DEPUTY DIRECTOR OF HIGHWAYS, REGION #1 ENGINEER

ENGINEER'S CERTIFICATION  
STATE OF ILLINOIS) SS.  
COUNTY OF DU PAGE)

I, SIGTAS P. VAZNELIS, A REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS, HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY MORRIS ENGINEERING, INC. 5100 S. LINCOLN AVENUE, SUITE 100, LISLE, ILLINOIS, 60532 UNDER MY PERSONAL DIRECTION. THIS TECHNICAL SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS.

DATED THIS 18 DAY OF December, A.D. 2009

ILLINOIS REGISTERED PROFESSIONAL ENGINEER 062-044114  
MY REGISTRATION EXPIRES ON NOVEMBER 30, 2011

NOTE: UNLESS THIS DOCUMENT BEARS THE ORIGINAL SIGNATURE AND SEAL OF THE DESIGN PROFESSIONAL ENGINEER, IT IS NOT A VALID TECHNICAL SUBMISSION.



PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS

LOCAL ROADS FIELD ENGINEER: MELCHOR MANGOBA (847)705-4408  
CONSULTANT: MORRIS ENGINEERING, INC. (630) 271-0770

PLOT DATE: Dec 17, 2009  
FILENAME: I:\09-PH-0002\PLANS-ENGINEV-1\ang 09-12-17.dwg

CONTRACT NO. 63413

SUMMARY OF QUANTITIES				SIDEWALK CONSTRUCTION	SIGNALS CONSTRUCTION	HARLEM AVE	HARLEM AVE.	HARLEM AVE.	HARLEM AVE.	McCARTHY RD	135TH STREET	
				CODE	CODE	131ST ST.	ISHNALA AVE.	AT	119TH PL.	OAKRIDGE DR.	W. OF SPYGLASS CIR.	
ITEM				SFTY-1B	Y031-1F	TO	TO	123RD ST.	TO	TO	TO	
				18	1F	ISHNALA AVE.	127TH ST.		BRIDGE	DIANE DR.	RIDGELAND AVE.	
UNIT	TOTAL	SUBTOTAL	SUBTOTAL									
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	126	126	0	25					67	34
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	18	18	0						18	
20101100	TREE TRUNK PROTECTION	EACH	27	27	0	14	2				10	1
* 20101200	TREE ROOT PRUNING	EACH	27	27	0	14	2				10	1
* 20101400	NITROGEN FERTILIZER NUTRIENT	POUND	105	105	0							
* 20101500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	105	105	0							
* 20101600	POTASSIUM FERTILIZER NUTRIENT	POUND	105	105	0							
20200100	EARTH EXCAVATION	CU YD	765	765	0	290	80	8	221	46		120
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	3214	3214	0	1130	140	6	457	212		1269
* 25000110	SEEDING, CLASS 1A	ACRE	0.46	0.46	0	0.16					0.04	0.26
* 25200100	SODDING	SQ YD	940	940	0	337	140	6	457			
28000400	PERIMETER EROSION BARRIER	FOOT	4428	4428	0	1555	300		937	638		998
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	2572	2572	0	871	186	31	578	356		550
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	23151	23151	0	7838	1675	282	5202	3202		4952
42400800	DETECTABLE WARNINGS	SQ FT	277	277	0	18	54	36	85	66		18
44000600	SIDEWALK REMOVAL	SQ FT	442	442	0			282	102			58
44001700	COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT	FOOT	265	265	0	12	60	10	152	3		28
54200637	PIPE CULVERTS, TYPE 1, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 12"	FOOT	80	80	0					70		10
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	21	21	0						21	
550A00700	STORM SEWERS, CLASS A, TYPE 1 15"	FOOT	9	9	0						9	
60207405	CATCH BASINS, TYPE C, TYPE 5 FRAME, CLOSED LID	EACH	1	1	0						1	
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	1	1	0						1	
60250200	CATCH BASINS TO BE ADJUSTED	EACH	1	1	0							1
60255500	MANHOLES TO BE ADJUSTED	EACH	6	6	0		1			1		4
60266600	VALVE BOXES TO BE ADJUSTED	EACH	1	1	0			1				
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	4	4	0	4						
63200310	GUARDRAIL REMOVAL	FOOT	84	84	0	84						
67100100	MOBILIZATION	L SUM	1	1	0							
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	1	0							
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1	0							
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS & SYMBOLS	SQ FT	1320	0	1320	380		480	480			
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1596	1596	0	388		409	353	269		177
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	105	105	0	105						
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	424	424	0	119		110	166			29
* 78300400	THERMOPLASTIC PAVEMENT MARKING REMOVAL	SQ FT	320	320	0	320						
* 81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	32	0	32						32	
* 81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	32	0	32						32	
* 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3	0	3	1			1		1	
* 87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2520	0	2520	860		760	900			
* 87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2490	0	2490	850		750	890			
* 87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	4	0	4	1					3	
* 87800115	CONCRETE FOUNDATION, TYPE A	EACH	3	0	3						3	
* 87900200	DRILL EXISTING HANDHOLE	EACH	3	0	3						3	
* 88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	10	0	10	2			6		2	
* 88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2	0	2	1					1	
* 88800100	PEDESTRIAN PUSH-BUTTON	EACH	14	0	14	4			6		4	
* 89502200	MODIFY EXISTING CONTROLLER	EACH	3	0	3	1			1		1	
X0359600	REMOVE AND REINSTALL WOOD SIGN POST	EACH	1	1	0						1	
X0322923	SEGMENTAL CONCRETE BLOCK WALL	SQ FT	1000	1000	0							1000
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	40	0	40	20					20	
X0656100	DRIVEWAY PAVEMENT REMOVAL AND REPLACEMENT	SQ YD	258	258	0		178	2	78			
XX002012	RELOCATE SIGN, SPECIAL	EACH	14	14	0	2	2				3	2
XX003435	PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT	SQ YD	257	257	0		220				37	
* B0237345	TREE, PYRUS CALLERYANA CLEVELAND (CLEVELAND SELECT CALLERY PEAR), 2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	2	2	0						2	

\* DENOTES SPECIALTY ITEMS

FILE NAME \* H:\09-PH\3002\PLANS-ENG\REV-1\dwg\09-  
 USER NAME \* \$USER\$ PH-3002 09-12-24.dwg  
 PLOT SCALE = \$SCALE\$  
 PLOT DATE = Dec 24, 2009

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CITY OF PALOS HEIGHTS SIDEWALK IMPROVEMENTS SUMMARY OF QUANTITIES	F.A.P. RTE. 348	SECTION 09-00044-00-SW	COUNTY COOK	TOTAL SHEETS 29	SHEET NO. 2	CONTRACT NO. 6341.3	ILLINOIS FED. AID PROJECT
SCALE: NA	SHEET NO. OF SHEETS STA. TO STA.							

**GENERAL NOTES**

- ALL EARTHWORK, GRADING, UTILITIES, AND STREET IMPROVEMENTS WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS' STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, AND ALL REVISIONS THERETO.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND HEALTHFUL WORKING CONDITIONS IN ACCORDANCE WITH SECTION 107 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE URBAN COMMITTEE OF THE ASSOCIATION OF ILLINOIS SOIL AND WATER CONSERVATION DISTRICTS' PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL IN ILLINOIS AND ALL REVISIONS THERETO AND IN ACCORDANCE WITH THE DETAILS ON THE PLANS.
- THE CONTRACTOR SHALL BE AWARE OF POTENTIAL CONFLICTS WITH EXISTING UTILITIES AS INDICATED ON THE PLANS. THE CONTRACTOR SHALL EXCAVATE AROUND UTILITIES TO DETERMINE ELEVATIONS BEFORE BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING EACH OF THE UTILITY COMPANIES BEFORE ANY WORK COMMENCES. ALL UTILITIES SHALL BE STAKED PRIOR TO CONSTRUCTION.
- THE OWNER WILL FURNISH THE CONTRACTOR WITH LINES, GRADES AND ELEVATIONS NECESSARY TO THE PROPER PROSECUTION AND CONTROL OF THE WORK ONCE.
- THE CONTRACTOR SHALL GIVE THE ENGINEER AT LEAST SEVENTY-TWO (72) HOURS NOTICE FOR ANY STAKING TO BE DONE. EACH OF THE VARIOUS ITEMS OF WORK COVERED BY THIS CONTRACT WILL BE STAKED ONCE. ADDITIONAL STAKING REQUIRED DUE TO THE CONTRACTOR'S NEGLIGENCE IN PRESERVING THE STAKES SHALL BE PAID FOR BY THE CONTRACTOR AT THE CURRENT HOURLY RATE.
- THE CONTRACTOR SHALL INFORM THE ENGINEER AND THE MUNICIPALITY AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.  
TELEPHONE NUMBERS: IDOT REGION ONE ENGINEER - (847) 705-4110  
CITY ENGINEER - (830) 271-0770  
CITY OF PALOS HEIGHTS - (708) 480-3033
- THE CONTRACTOR RESPONSIBLE FOR DRAINAGE IMPROVEMENTS (UNDERGROUND STRUCTURES AND CONDUITS) SHALL DISPOSE OF ALL SURPLUS EXCAVATED MATERIAL FROM TRENCHES OR STRUCTURE EXCAVATIONS AND SHALL DEPOSIT SAID SURPLUS MATERIALS ON THE SITE IN ACCORDANCE WITH THE GRADING PLAN OR AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL NOT PLACE ANY EXCAVATED MATERIAL UPON ANY TOPSOIL. THE TOPSOIL SHALL BE REMOVED FROM ALL AREAS TO BE FILLED AND SHALL BE STOCKPILED IN AREAS AS DIRECTED BY THE ENGINEER.
- THE CONTRACTOR SHALL NOT DISCHARGE INTO STREAMS, PONDS, WETLANDS OR ITS TRIBUTARIES ANY MOTOR OIL, TRANSMISSION FLUID, LUBRICANTS OR ANY OTHER PETROLEUM DISTILLATES. ANY PETROLEUM DISTILLATES DISCHARGED ON THE GROUND SURFACE SHALL BE PROMPTLY AND PROPERLY REMOVED PRIOR TO THE RESUMPTION OF ANY WORK ON THE PROJECT.
- THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING FIELD TILES. ANY FIELD TILES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS SOLE EXPENSE. INVESTIGATION SHALL BE MADE TO INSURE THAT FIELD TILES DO NOT CONVEY OFF SITE WATER. TILES THAT CONVEY OFF SITE WATER SHALL BE REROUTED THROUGH THE SITE. TILES THAT DO NOT CONVEY OFF SITE WATER SHALL BE ABANDONED IN AN APPROPRIATE MANNER APPROVED BY THE MUNICIPALITY. FIELD TILES WITHIN A RIGHT-OF-WAY SHALL BE REMOVED AND BACKFILLED WITH CA-6 COMPACTED IN EIGHT INCH LIFTS TO THE BOTTOM OF THE ROADWAY BASE. EXISTING FIELD TILES SHALL BE REMOVED BY SLIT TRENCHING.
- THE CONTRACTOR RESPONSIBLE FOR DRAINAGE IMPROVEMENTS SHALL BE RESPONSIBLE TO PLACE ALL FIRE HYDRANTS, FRAMES AND LIDS OR GRATES, AND ALL GRATES FOR MANHOLES, CATCH BASINS, INLETS AND VALVE VAULTS AT THE ELEVATIONS SHOWN AND SPECIFIED ON THE PLANS. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR SAID ADJUSTMENT AND THE COST OF SAID ADJUSTMENT SHALL BE INCLUDED IN THE UNIT PRICE FOR THE VARIOUS DRAINAGE STRUCTURES MENTIONED ABOVE.
- THE CONTRACTOR SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS AND, WHEN NECESSARY, SHALL ON A DAILY BASIS CLEAN THE PAVEMENT OF SUCH DIRT AND DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL PROVIDE PIPE BEDDING IN ACCORDANCE WITH THE DETAIL ON THE PLANS. THE COST OF THE BEDDING SHALL BE INCLUDED IN THE UNIT PRICE PER LINEAL FOOT OF THE VARIOUS SIZES OF STORM SEWER. NO ADDITIONAL COMPENSATION WILL BE MADE FOR PIPE BEDDING.
- THE CONTRACTOR SHALL PLACE TOPSOIL AT A 4" MINIMUM DEPTH AND SEED OR SOD ALL AREAS DESIGNATED BY THE ENGINEER.
- THE CONTRACTOR SHALL EXAMINE THE DRAINAGE PATTERNS SHOWN ON THE PLANS AND MAKE CERTAIN THAT ALL OVERFLOW POINT ELEVATIONS AND CROSS SECTIONS ARE CONSTRUCTED STRICTLY IN ACCORDANCE WITH THOSE SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK IN THE RIGHT OF WAY OR EASEMENTS TO LOCATE UTILITIES, AND CONTACT THE OWNER'S REPRESENTATIVE SHOULD PUBLIC UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS.

**DEMOLITION**

- THE CONTRACTOR SHALL ARRANGE FOR THE DISCONNECTION AND ABANDONMENT OF ALL UTILITY SERVICES INCLUDING WATER, SEWER, GAS, ELECTRIC, CABLE TV, AND TELEPHONE.
- ALL EXISTING BUILDINGS, FOUNDATIONS, CONCRETE OR ASPHALT PAVEMENT OR WALKS, CURB AND GUTTER AND MISCELLANEOUS STRUCTURES (INCLUDING, BUT NOT LIMITED TO FENCES, POLES, YARD LIGHTS, ELECTRICAL PANELS, WHEEL STOPS AND MISCELLANEOUS DEBRIS) TO BE DEMOLISHED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.
- ALL EXISTING TREES, BRUSH AND MISCELLANEOUS VEGETATION TO BE REMOVED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.
- ALL EXISTING SANITARY SEWERS, STORM SEWERS, WATERMANS AND APPURTENANCES WITHIN THE AREA OF THE PROPOSED BUILDING AND OUTSIDE THE BUILDING INDICATED TO BE ABANDONED SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR. ALL OTHER PIPES SHALL BE SEALED WITH BRICK AND MORTAR AND LEFT IN PLACE.
- VOIDS LEFT BY ANY ITEM REMOVED UNDER ANY PROPOSED BUILDING, PAVEMENT OR WALK OR WITHIN 24" THEREOF SHALL BE FILLED WITH CLEAN LOW VOID SELECT MATERIAL CONSISTING OF STONE, GRAVEL OR SAND COMPACTED TO 95% OF STANDARD PROCTOR.
- ALL EXISTING FIELD DRAINAGE TILE OR STORM SEWERS ENCOUNTERED OR DAMAGED DURING CONSTRUCTION SHALL EITHER BE RESTORED TO THEIR ORIGINAL CONDITION, PROPERLY REROUTED AND/OR CONNECTED TO THE STORM SEWER SYSTEM.
- THE CONTRACTOR SHALL COORDINATE REMOVAL OF ELECTRICAL FACILITIES WITH THE CITY OF PALOS HEIGHTS ELECTRIC DEPARTMENT.

**SOIL EROSION AND SEDIMENTATION CONTROL NOTES**

- THE FOLLOWING PRINCIPLES SHALL APPLY TO ALL MOVEMENT OF EARTH AND STORM DRAINAGE. SEDIMENT AND EROSION CONTROL DEVICES SHALL BE FUNCTIONAL BEFORE LAND IS OTHERWISE DISTURBED ON SITE.
- THE SMALLEST PRACTICAL AREA OF LAND IS TO BE EXPOSED AT ANY GIVEN TIME DURING CONSTRUCTION. EXPOSURE SHALL BE KEPT TO AS SHORT A DURATION OF TIME AS IS PRACTICAL.
- STABILIZE AND PROTECT DISTURBED AREAS. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS, AND THE USE OF TEMPORARY OR PERMANENT MEASURES. MECHANICAL, STRUCTURAL, AND/OR VEGETATIVE CONTROL METHODS SHALL BE USED IN ORDER TO RETARD SOIL EROSION IF DIRECTED BY THE OWNER OR HIS AUTHORIZED REPRESENTATIVE.
- KEEP RUN-OFF VELOCITIES LOW WITH SHORT SLOPES AND LOW GRADIENTS. THE INSTALLATION OF NATURAL VEGETATIVE COVER HELPS TO KEEP STORM WATER VELOCITIES LOW, AND THUS LIMIT SOIL EROSION EFFECTS.
- PROTECT DISTURBED AREAS FROM STORM WATER RUN-OFF. SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF UPLAND DISTURBANCE. PROTECTIVE MEASURES SHALL BE UTILIZED TO DIVERT RUN-OFF FROM DISTURBED AREAS.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS SHALL BE PERMANENTLY STABILIZED.
- NATURAL PLANT COVER SHALL BE MAINTAINED AND PROTECTED AND ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTION AND REPAIR DURING CONSTRUCTION.
- PROTECTION OF EXISTING FACILITIES AND UTILITIES - THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL NECESSARY FACILITIES FOR THE PROTECTION OF ALL EXISTING UTILITIES ON OR ADJACENT TO THE PROJECT. ALL STORM SEWER FACILITIES THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED, FILTERED, OR OTHERWISE TREATED TO REMOVE SEDIMENT. FURTHERMORE, ANY DAMAGE DONE BY HIM, HIS AGENTS, OR ASSIGNS SHALL BE REPAIRED AT NO ADDITIONAL COMPENSATION.
- DIRT ON PAVEMENT - WHERE A CONTRACTOR'S EQUIPMENT IS OPERATED UPON AN EXISTING PAVEMENT USED BY TRAFFIC THE CONTRACTOR SHALL CLEAN THE PAVEMENT OF ALL DIRT AND DEBRIS AT THE END OF EACH DAY'S OPERATIONS AND AT OTHER TIMES AS DIRECTED BY THE OWNER, THE ENGINEER, OR THE GOVERNING MUNICIPALITY. THE CLEANING WORK SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S CONTRACT FOR EARTH EXCAVATION.
- DUST CONTROL - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF EXCESSIVE DUST DURING THE CONSTRUCTION PERIOD UNTIL THE ROAD PAVEMENT IS INSTALLED BY THE PAVING CONTRACTOR. THE REQUIREMENT FOR DUST CONTROL SHALL BE AS DIRECTED BY THE LOCAL APPROVING AUTHORITIES OR THE ENGINEER, AND SUCH DUST CONTROL (IF REQUIRED) SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR CITY OF PALOS HEIGHTS.
- THE CONTRACTOR SHALL MAKE AN EFFORT TO MINIMIZE USE OF HEAVY EQUIPMENT WITHIN THE DESIGNATED DRAINAGE FACILITIES.

**EXCAVATION**

- ALL SITE CLEARING, EXCAVATION, GRADING, COMPACTION, SUBGRADE PREPARATION, BASE COURSE, SURFACE COURSE, PCC CURB AND GUTTER AND SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS, LATEST EDITION.
- EARTHWORK UNDER THIS CONTRACT SHALL INCLUDE THE FOLLOWING:
  - REMOVAL OF EXISTING VEGETATION WITHIN CONSTRUCTION LIMITS FROM THE SITE.
  - PROTECTION OF CERTAIN TREES AS SHOWN ON PLANS.
  - STRIPPING OF ALL TOPSOIL AND OTHER UNSUITABLE MATERIALS FROM BUILDING AND/OR PAVEMENT AREAS AND REMOVAL FROM SITE OF ALL EXCESS.
  - COMPLETE REMOVAL AND DISPOSAL OF THE NATURAL GROUND TO THE PROPOSED SUB-GRADE ELEVATION OF NEW PAVEMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE REQUIREMENTS OF ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL ORDINANCES. THE COST OF ALL WORK NECESSARY TO MEET THESE REQUIREMENTS SHALL BE INCLUDED IN THE COST OF THE CONTRACTOR'S CONTRACT FOR PERIMETER EROSION BARRIER.

**TRAFFIC CONTROL AND PROTECTION**

- ALL WORK CONDUCTED WITHIN PUBLIC RIGHTS-OF-WAY SHALL BE GOVERNED BY THE FOLLOWING SPECIFICATION FOR TRAFFIC CONTROL. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE ARTICLES OF SECTION 107 AND 700 OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. (HEREINAFTER STANDARD SPECIFICATIONS), THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS" AND SPECIAL DETAILS OF ILLINOIS HIGHWAY STANDARDS.
- THE FOLLOWING TRAFFIC CONTROL REQUIREMENTS ARE OF SPECIAL IMPORTANCE. CONFORMANCE TO THESE REQUIREMENTS, HOWEVER, SHALL NOT RELIEVE THE CONTRACTOR FROM CONFORMING TO ALL OTHER APPLICABLE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- SPECIAL ATTENTION IS CALLED TO ARTICLES 107.08 AND 107.14 OF THE STANDARD SPECIFICATIONS AND THE FOLLOWING HIGHWAY STANDARDS, DETAILS AND SUPPLEMENTAL SPECIFICATIONS AND PHOTOCOPIED SPECIAL PROVISIONS CONTAINED HEREIN, RELATING TO:
  - 701301-03 LANE CLOSURE - SHORT OPERATIONS
  - 701501-05 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
  - 701801-04 LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
- AT THE PRECONSTRUCTION MEETING THE CONTRACTOR SHALL FURNISH THE NAME OF THE INDIVIDUAL IN HIS DIRECT EMPLOY WHO IS TO BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF THE TRAFFIC CONTROL FOR THIS PROJECT. IF THE ACTUAL INSTALLATION AND MAINTENANCE ARE TO BE ACCOMPLISHED BY A SUBCONTRACTOR, CONSENT SHALL BE REQUESTED OF THE ENGINEER AT THE TIME OF THE PRECONSTRUCTION MEETING IN ACCORDANCE WITH ARTICLE 108.01 OF THE STANDARD SPECIFICATIONS. THIS SHALL NOT RELIEVE THE CONTRACTOR OF THE FOREGOING REQUIREMENT FOR A RESPONSIBLE INDIVIDUAL IN HIS DIRECT EMPLOY TO SUPERVISE THIS WORK. THE CONTRACTOR WILL PROVIDE THE NAME OF ITS REPRESENTATIVE WHO WILL BE RESPONSIBLE FOR THE ADMINISTRATION OF THE TRAFFIC CONTROL PLAN.
- THIS ITEM OF WORK SHALL INCLUDE FURNISHING, INSTALLING, MAINTAINING, RELOCATING AND REMOVING ALL TRAFFIC CONTROL DEVICES USED FOR THE PURPOSE OF REGULATING, WARNING OR DIRECTING TRAFFIC DURING THE CONSTRUCTION OR MAINTENANCE OF THIS IMPROVEMENT.
- THE GOVERNING FACTOR IN THE EXECUTION AND STAGING OF WORK FOR THIS PROJECT IS TO PROVIDE THE MOTING PUBLIC WITH THE SAFEST POSSIBLE TRAVEL CONDITIONS ALONG THE ROADWAY THROUGH THIS CONSTRUCTION ZONE. THE CONTRACTOR SHALL SO ARRANGE HIS OPERATION AS TO KEEP THE CLOSING OF ANY LANE OF THE ROADWAY TO A MINIMUM.
- ALL TRAFFIC CONTROL DEVICES USED ON THIS PROJECT SHALL CONFORM TO THE PLANS, SPECIAL PROVISIONS, TRAFFIC CONTROL STANDARDS, AND THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. NO MODIFICATION OF THESE REQUIREMENTS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- TRAFFIC CONTROL DEVICES INCLUDE: SIGNS AND THEIR SUPPORTS, SIGNALS, PAVEMENT MARKINGS, BARRICADES WITH SAND BAGS, CHANNELIZING DEVICES, WARNING LIGHTS, ARROWBOARDS, FLAGGERS, OR ANY OTHER DEVICE USED FOR THE PURPOSE OF REGULATING, WARNING OR GUIDING TRAFFIC THROUGH THE CONSTRUCTION ZONE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LOCATION, INSTALLATION, AND ARRANGEMENT OF ALL TRAFFIC CONTROL DEVICES. SPECIAL ATTENTION SHALL BE GIVEN TO ADVANCE WARNING SIGNS DURING CONSTRUCTION OPERATIONS IN ORDER TO KEEP LANE ASSIGNMENT CONSISTENT WITH BARRICADE PLACEMENT AT ALL TIMES. THE CONTRACTOR SHALL COVER ALL TRAFFIC CONTROL DEVICES WHICH ARE INCONSISTENT WITH DETOUR OR LANE ASSIGNMENT PATTERNS DURING THE TRANSITION FROM ONE CONSTRUCTION STAGE TO ANOTHER.
- CONSTRUCTION SIGNS REFERRING TO DAYTIME LANE CLOSURES DURING WORKING HOURS SHALL BE REMOVED OR COVERED DURING NON-WORKING HOURS.
- THE CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL DEVICES INSTALLED BY HIM ARE OPERATIONAL 24 HOURS A DAY, INCLUDING SUNDAYS AND HOLIDAYS.
- THE CONTRACTOR SHALL PROVIDE A MANNED TELEPHONE ON A CONTINUOUS 24-HOUR A DAY BASIS TO RECEIVE NOTIFICATION OF ANY DEFICIENCIES REGARDING TRAFFIC CONTROL AND PROTECTION AND SHALL DISPATCH MEN, MATERIALS AND EQUIPMENT TO CORRECT ANY SUCH DEFICIENCIES. THE CONTRACTOR SHALL RESPOND TO ANY CALL FROM THE ENGINEER OR MUNICIPALITY CONCERNING ANY REQUEST FOR IMPROVING OR CORRECTING TRAFFIC CONTROL DEVICES AND BEGIN MAKING THE REQUESTED REPAIRS WITHIN TWO HOURS FROM THE TIME OF NOTIFICATIONS.
- WHEN TRAVELING IN LANES OPEN TO PUBLIC TRAFFIC, THE CONTRACTOR'S VEHICLES SHALL ALWAYS MOVE WITH AND NOT AGAINST OR ACROSS THE FLOW OF TRAFFIC. THESE VEHICLES SHALL ENTER OR LEAVE WORK AREAS IN A MANNER WHICH WILL NOT BE HAZARDOUS TO, OR WILL NOT INTERFERE WITH, TRAFFIC AND SHALL NOT PARK OR STOP EXCEPT WITHIN DESIGNATED WORK AREAS. PERSONAL VEHICLES SHALL NOT PARK WITHIN THE RIGHT-OF-WAY EXCEPT IN SPECIFIC AREAS DESIGNATED BY THE ENGINEER.
- DELAYS TO THE CONTRACTOR CAUSED BY COMPLYING WITH THESE REQUIREMENTS WILL BE INCLUDED IN THE COST OF THE ITEM FOR TRAFFIC CONTROL AND PROTECTION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

**HOT-MIX MIXTURE REQUIREMENTS**

MIXTURE TYPE	VOIDS
<b>DRIVEWAYS</b>	
HMA SURFACE COURSE, MIX C, N 50 (IL 9.5 mm); 2"	4% @ 50 Gyr
HMA BASE COURSE (HMA BINDER IL-19 mm); PE -6", CE - 8"	4% @ 50 Gyr

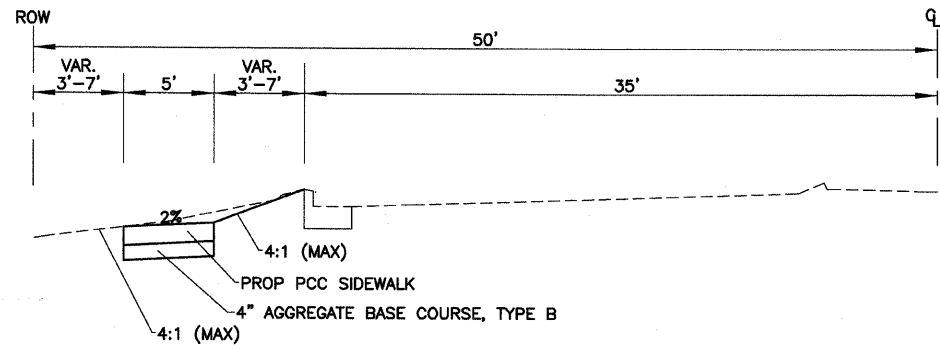
THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

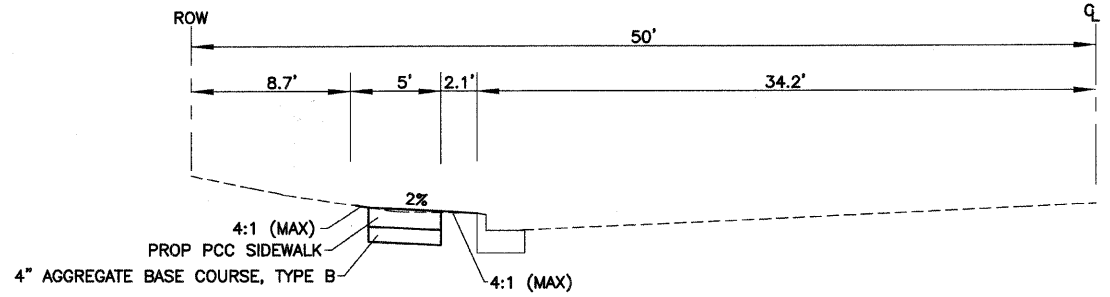
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PLOT SCALE = \$SCALE\$	CHECKED -	REVISED -			CONTRACT NO. 63413							
PLOT DATE = Dec 21, 2009	DATE -	REVISED -			ILLINOIS FED. AID PROJECT							

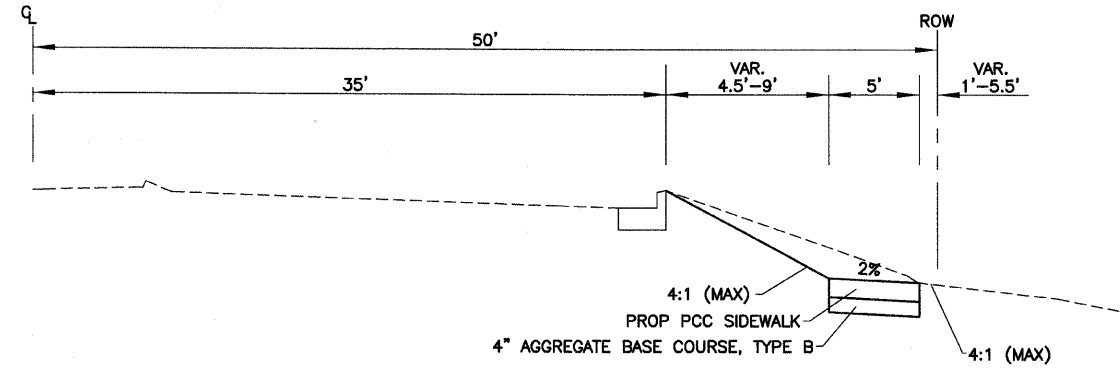
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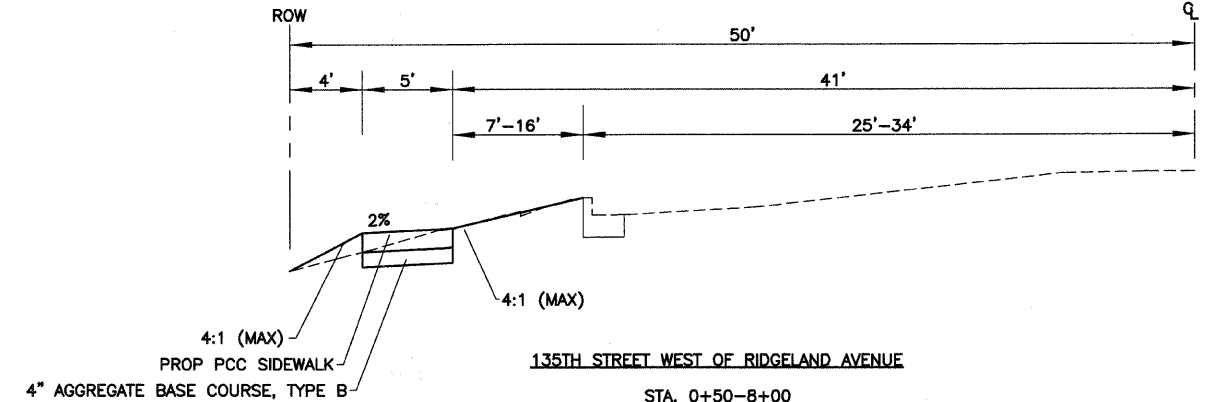
HARLEM AVENUE 131ST STREET TO ISHNALA DRIVE  
STA. 2+41-17+89



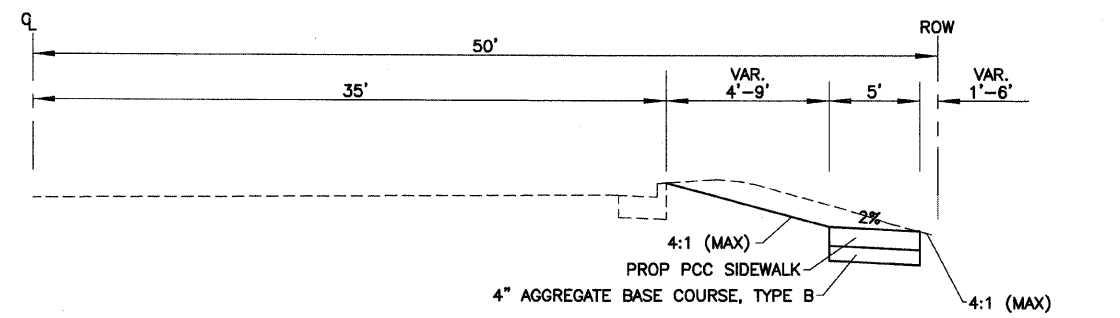
HARLEM AVENUE 119TH PLACE TO 119TH STREET  
STA. 83+85-83+95



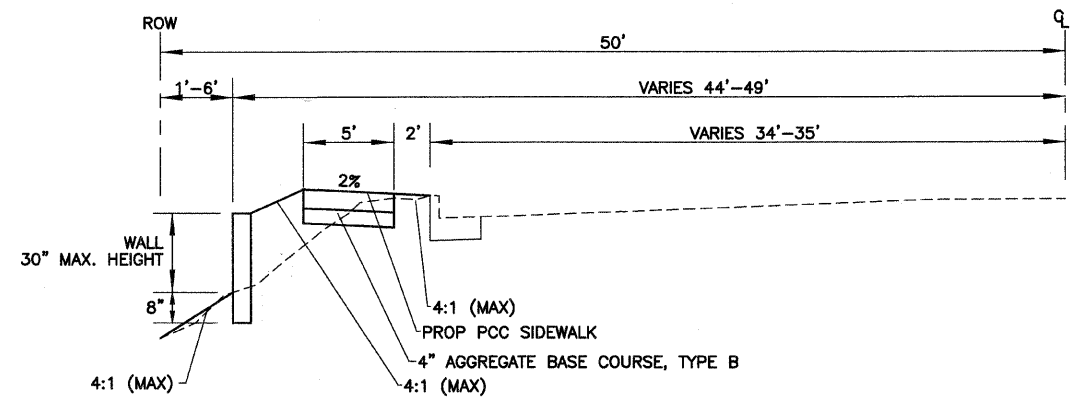
HARLEM AVENUE ISHNALA DRIVE TO 127TH STREET  
STA. 21+63-26+30



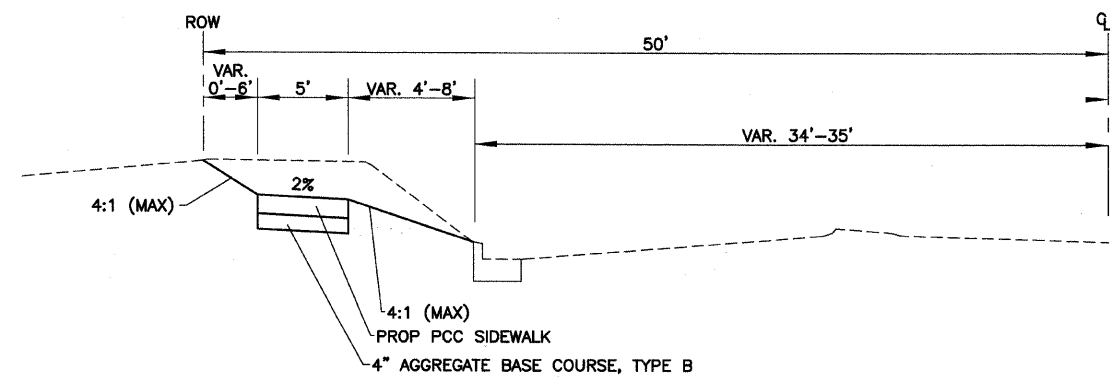
135TH STREET WEST OF RIDGELAND AVENUE  
STA. 0+50-8+00



HARLEM AVENUE 119TH PLACE TO 119TH STREET  
STA. 76+66-79+64



135TH STREET WEST OF RIDGELAND AVENUE  
STA. 8+10-11+07



HARLEM AVENUE 119TH PLACE TO 119TH STREET  
STA. 79+42-83+75  
STA. 84+05-85+50

PLOT DATE: Dec 17, 2009  
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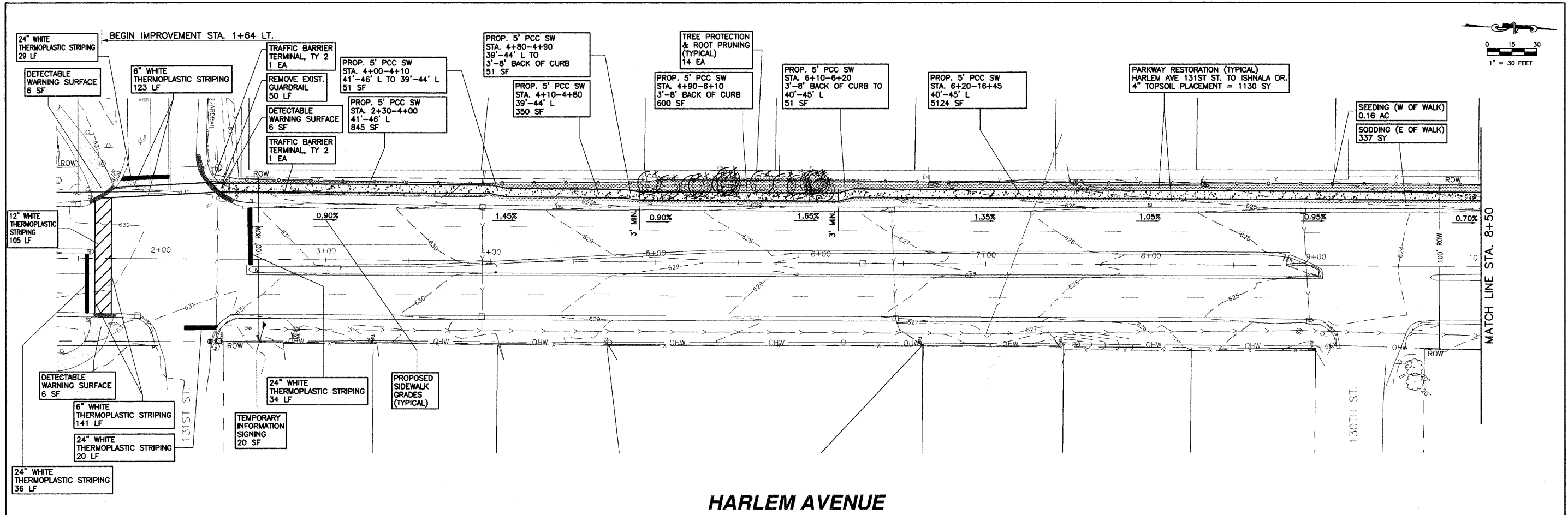
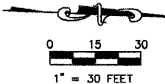
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

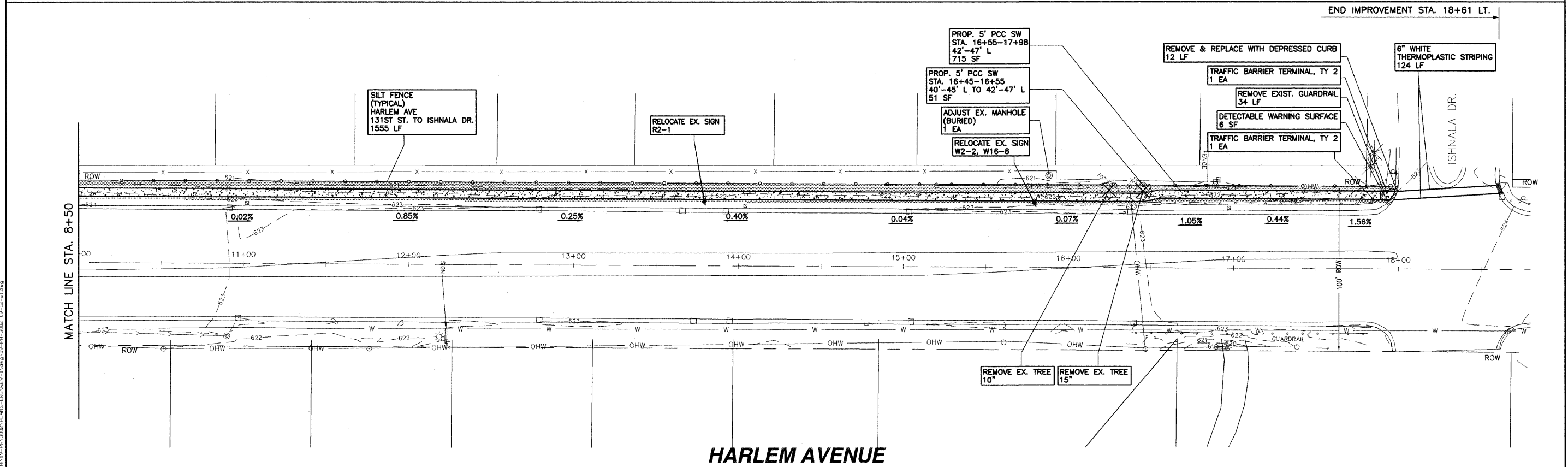
**CITY OF PALOS HEIGHTS SIDEWALK IMPROVEMENTS**  
**TYPICAL SECTIONS**

SCALE: 1"=2' V 1"=5' H SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-SW	COOK	29	4
CONTRACT NO. 63413			ILLINOIS FED. AID PROJECT	



**HARLEM AVENUE**

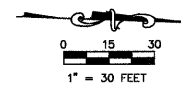


**HARLEM AVENUE**

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H:\09-PH\3002\PLANS-ENG\REV-1\dwg\09-PH-3002 09-12-21.dwg	PH-3002 09-12-21.dwg	DRAWN -	REVISED -			348	09-00044-00-SW	COOK	29	5	
PLOT SCALE = \$SCALE\$		CHECKED -	REVISED -			CONTRACT NO. 63413					
PLOT DATE = Dec 21, 2009		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE: 1"=30'		SHEET NO. 1 OF 6 SHEETS		STA. 1+50 TO STA. 18+50	

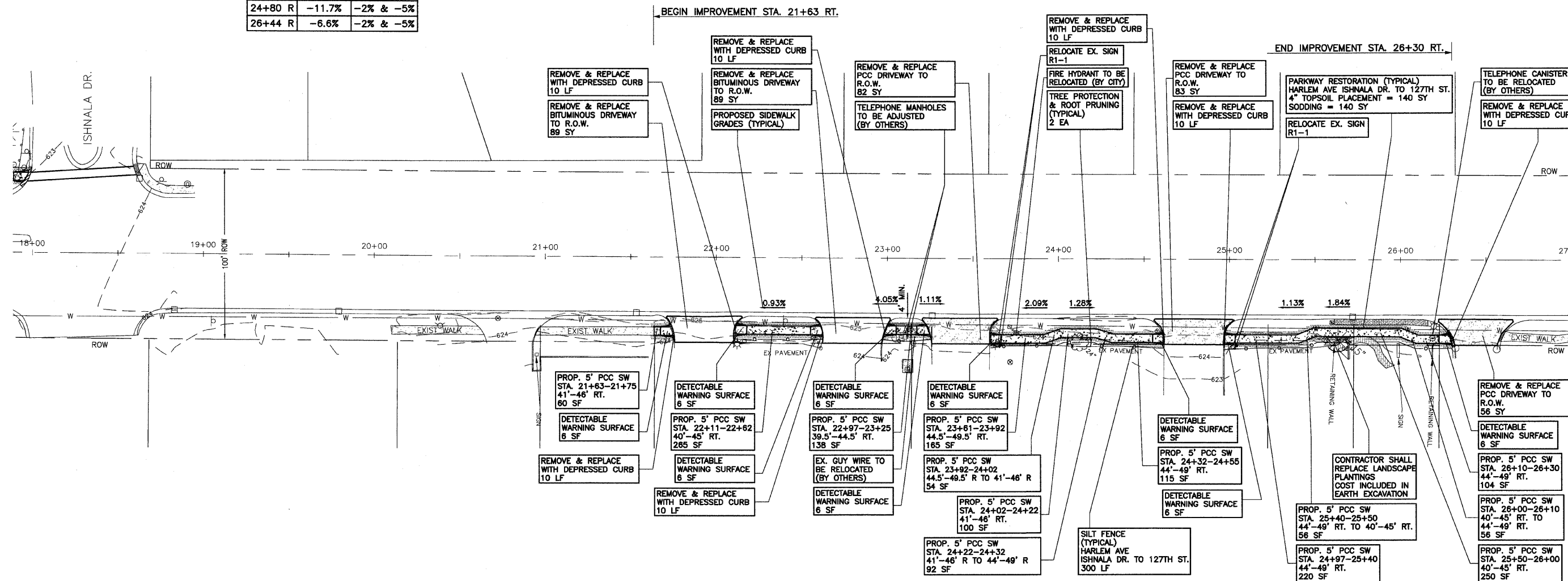




SIDEWALK CROSS-GRADES AT DRIVEWAYS

STATION	DRIVE GRADE	WALK GRADE
21+64 R	-12.7%	-2% & -5%
22+79 R	-9.5%	-2% & -5%
23+43 R	-10.9%	-2% & -5%
24+80 R	-11.7%	-2% & -5%
26+44 R	-6.6%	-2% & -5%

NOTE:  
WHERE WALK GRADE IS 2% & 5%, THE  
FIRST THREE FEET ARE AT 2% AND THE  
LAST TWO FEET ARE AT 5%.



**HARLEM AVENUE**

PLOT DATE: DEC 17, 2009  
 FILENAME: H:\09-PH\3002\PLANS-ENG\REV-1\dwg\09-

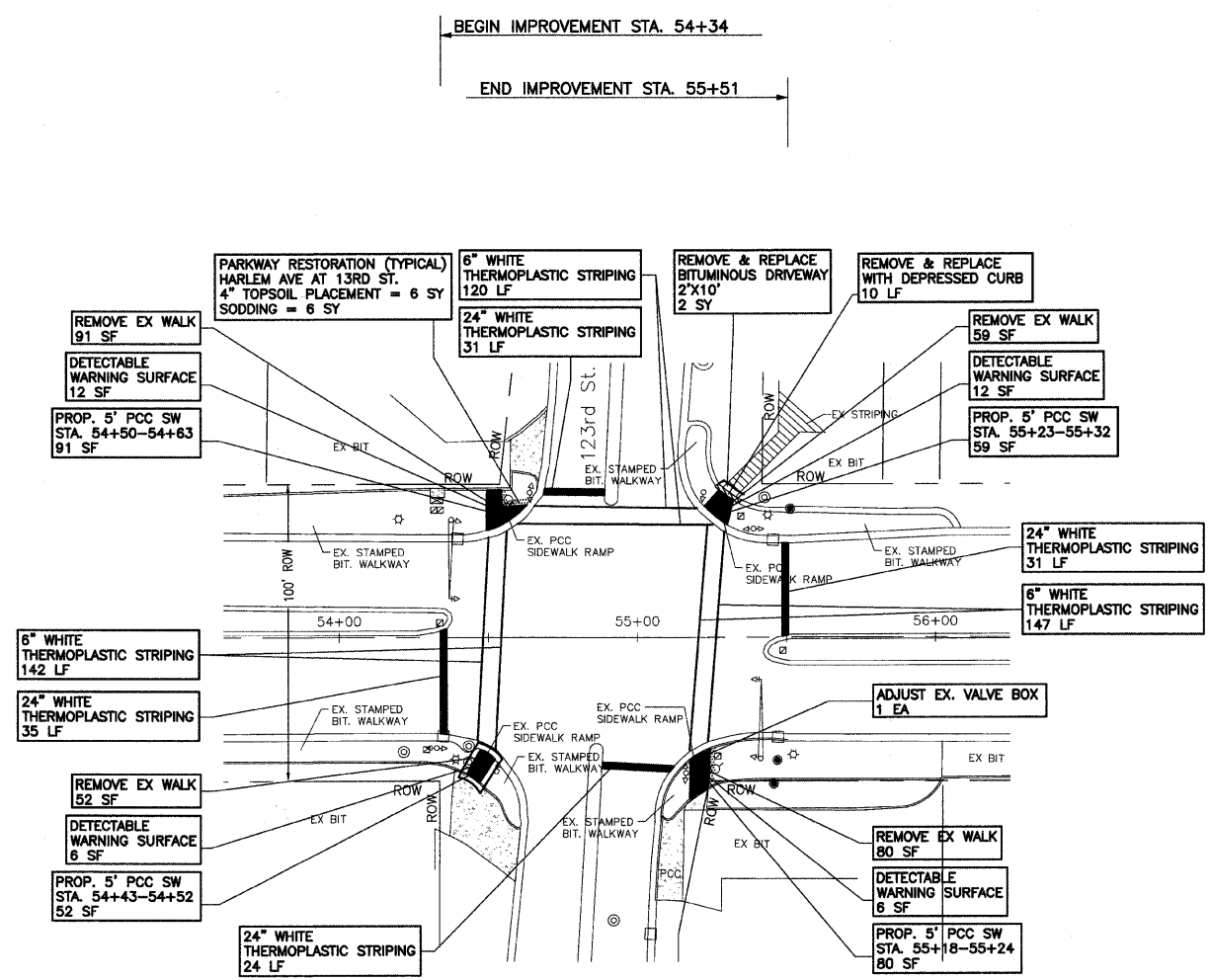
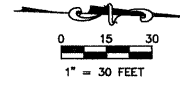
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PLOT DATE = Dec 17, 2009		DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CITY OF PALOS HEIGHTS SIDEWALK IMPROVEMENTS**  
**PLAN - HARLEM AVENUE - ISHNALA DRIVE TO 127TH STREET**

SCALE: 1"=30'    SHEET NO. 2 OF 6 SHEETS    STA. 18+00 TO STA. 27+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-SW	COOK	29	6
CONTRACT NO. 63413			ILLINOIS FED. AID PROJECT	



**HARLEM AVENUE**

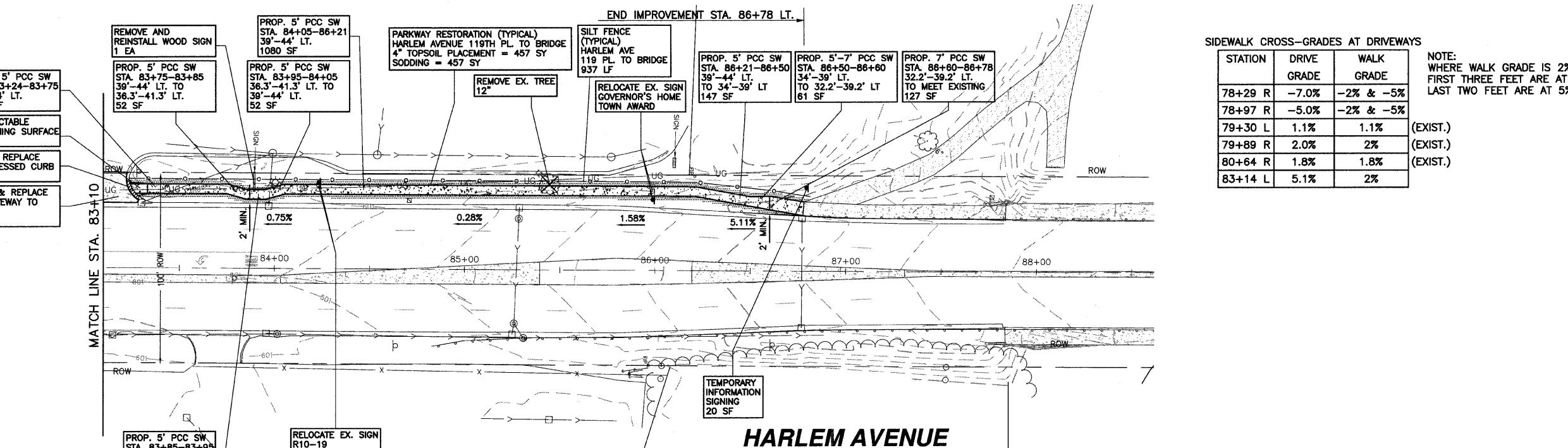
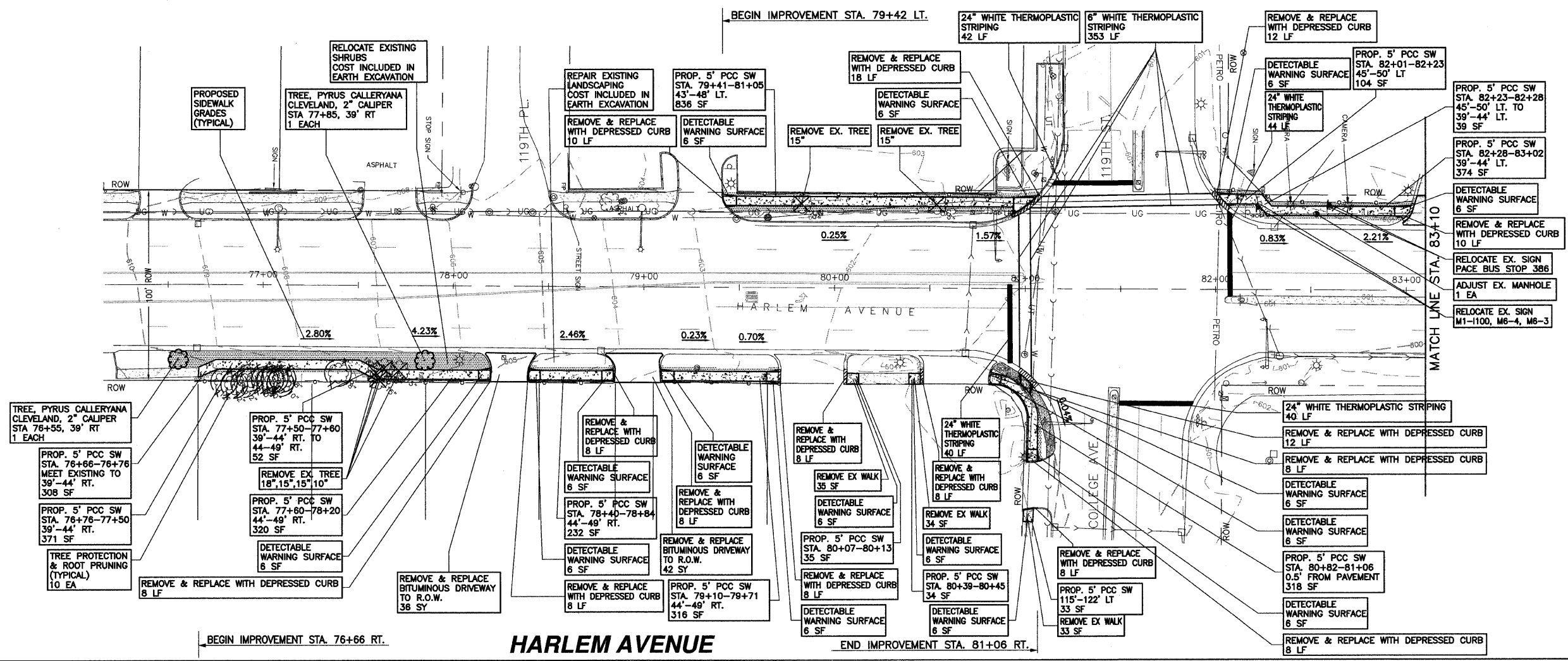
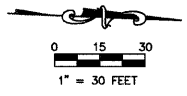
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PLOT SCALE = \$SCALE\$		CHECKED -	REVISED -
PLOT DATE = Dec 17, 2009		DATE -	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**CITY OF PALOS HEIGHTS SIDEWALK IMPROVEMENTS**  
**PLAN - HARLEM AVENUE AT 123RD STREET**  
 SCALE: 1"=30'    SHEET NO. 3 OF 6 SHEETS    STA. 53+50 TO STA. 56+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-SW	COOK	29	7
CONTRACT NO. 63413			ILLINOIS FED. AID PROJECT	



SIDEWALK CROSS-GRADES AT DRIVEWAYS

STATION	DRIVE GRADE	WALK GRADE
78+29 R	-7.0%	-2% & -5%
78+97 R	-5.0%	-2% & -5%
79+30 L	1.1%	1.1% (EXIST.)
79+89 R	2.0%	2% (EXIST.)
80+64 R	1.8%	1.8% (EXIST.)
83+14 L	5.1%	2%

NOTE: WHERE WALK GRADE IS 2% & 5%, THE FIRST THREE FEET ARE AT 2% AND THE LAST TWO FEET ARE AT 5%.

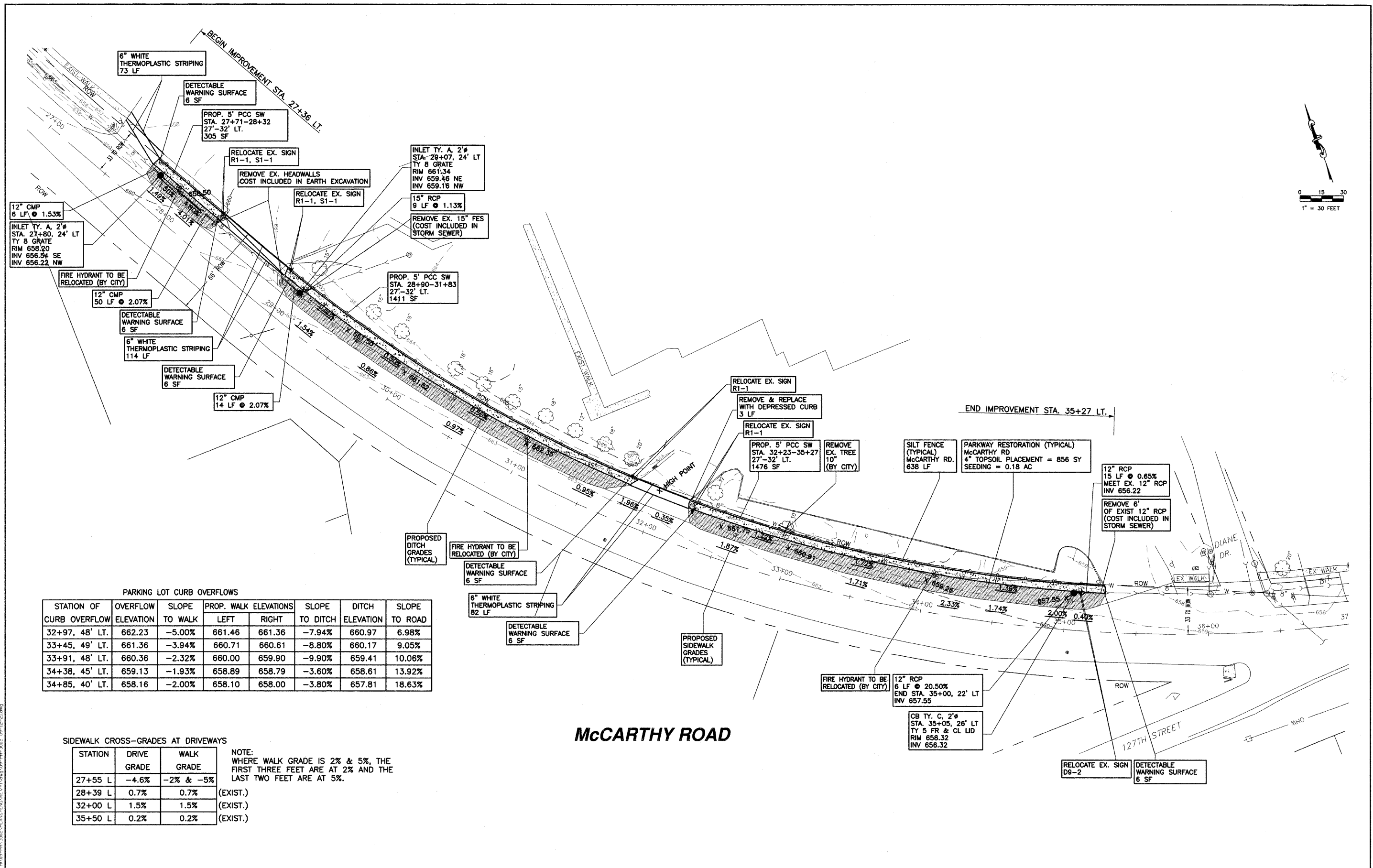
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DESIGNED -	REVISED -	CITY OF PALOS HEIGHTS SIDEWALK IMPROVEMENTS PLAN - HARLEM AVENUE - 119TH PLACE TO BRIDGE SCALE: 1"=30' SHEET NO. 4 OF 6 SHEETS STA. 76+40 TO STA. 88+50	F.A.P. RTE. 348	SECTION 09-00044-00-SW	COUNTY COOK	TOTAL SHEETS 29	SHEET NO. 8
DRAWN -	REVISED -		CONTRACT NO. 63413				
CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT				
DATE -	REVISED -						

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**HARLEM AVENUE**





PARKING LOT CURB OVERFLOWS

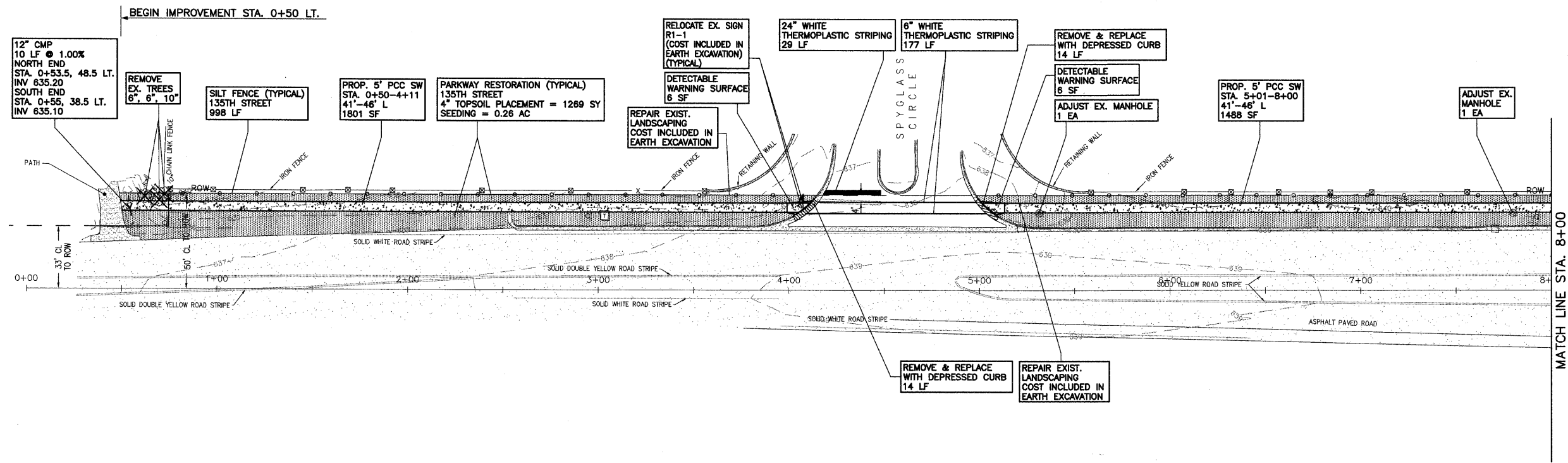
STATION OF CURB OVERFLOW	OVERFLOW ELEVATION	SLOPE TO WALK	PROP. WALK ELEVATIONS		SLOPE TO DITCH	DITCH ELEVATION	SLOPE TO ROAD
			LEFT	RIGHT			
32+97, 48' LT.	662.23	-5.00%	661.46	661.36	-7.94%	660.97	6.98%
33+45, 49' LT.	661.36	-3.94%	660.71	660.61	-8.80%	660.17	9.05%
33+91, 48' LT.	660.36	-2.32%	660.00	659.90	-9.90%	659.41	10.06%
34+38, 45' LT.	659.13	-1.93%	658.89	658.79	-3.60%	658.61	13.92%
34+85, 40' LT.	658.16	-2.00%	658.10	658.00	-3.80%	657.81	18.63%

SIDEWALK CROSS-GRADES AT DRIVEWAYS

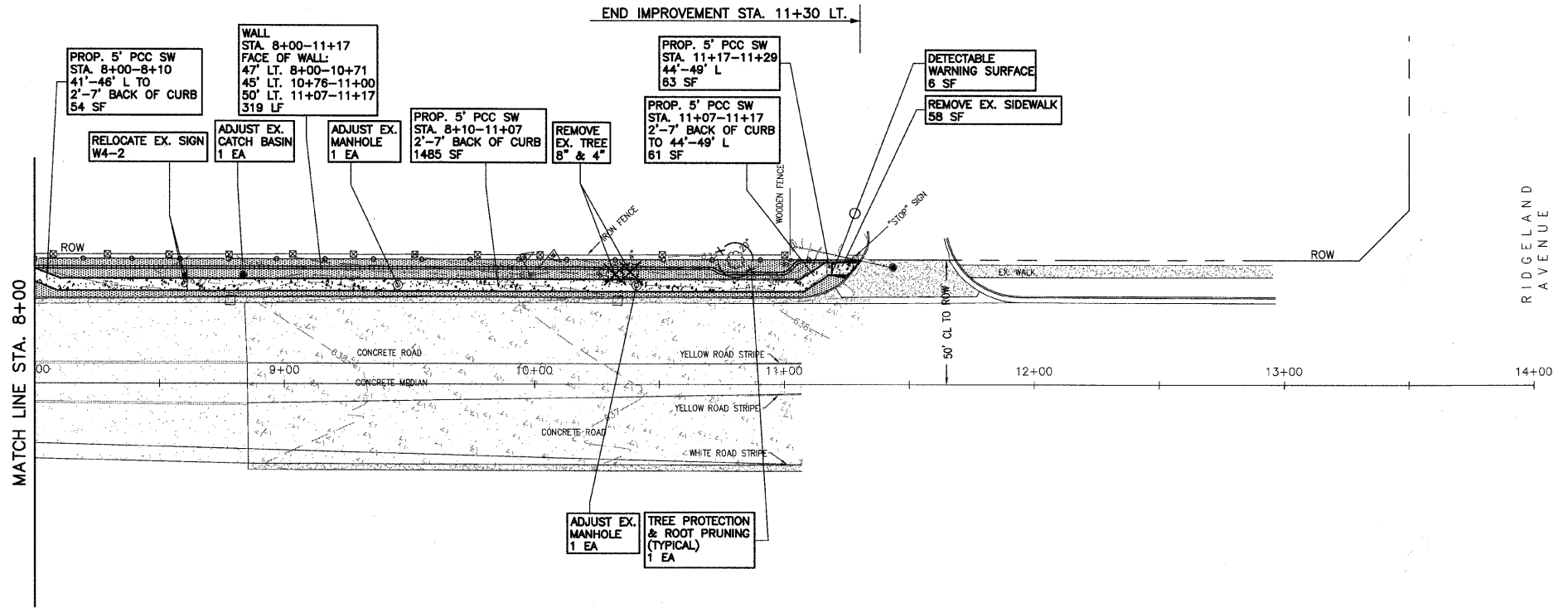
STATION	DRIVE GRADE	WALK GRADE
27+55 L	-4.6%	-2% & -5%
28+39 L	0.7%	0.7% (EXIST.)
32+00 L	1.5%	1.5% (EXIST.)
35+50 L	0.2%	0.2% (EXIST.)

NOTE: WHERE WALK GRADE IS 2% & 5%, THE FIRST THREE FEET ARE AT 2% AND THE LAST TWO FEET ARE AT 5%.

### McCARTHY ROAD



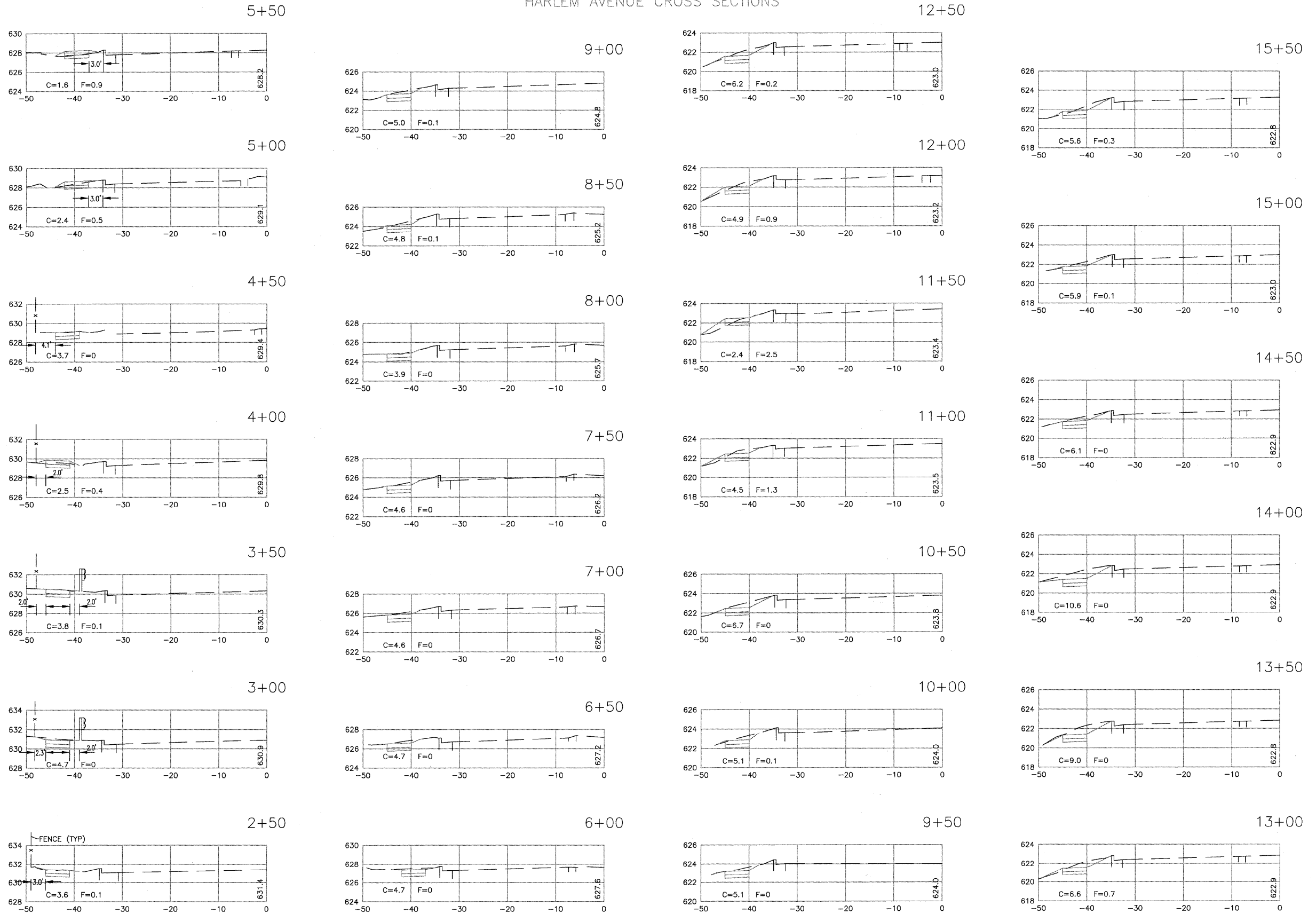
**135TH STREET**



STATION	PROP. WALK ELEVATIONS		PROP. WALL ELEVATIONS		PROP. WALK GRADES
	RIGHT	LEFT	T/W	F/G	
0+50	636.51	636.61			3.10%
1+00	638.06	638.16			-0.92%
2+00	637.14	637.24			-0.26%
2+50	637.01	637.11			0.18%
3+00	637.20	637.10			1.00%
4+00	638.19	638.09			
5+13	639.05	639.15			0.82%
6+00	639.76	639.86			-0.03%
7+00	639.75	639.85			-0.65%
8+00	639.08	639.18	639.20	638.70	-1.36%
8+50	638.40	638.50	638.50	637.50	0.02%
9+00	638.41	638.51	638.50	636.00	-1.02%
9+50	637.90	638.00	637.50	635.00	-0.90%
10+00	637.45	637.55	636.63	634.13	-1.30%
10+50	636.80	636.90	635.90	633.40	-1.00%
10+80	636.50	636.60	636.10	633.60	-0.95%
11+00	636.31	636.41	635.90	633.40	1.00%
11+17	636.48	636.58	636.60	635.95	

**135TH STREET**

HARLEM AVENUE CROSS SECTIONS



PLOT DATE: Dec 17, 2009  
 FILENAME: H:\09-PH\3002\PLANS-ENG\REV-1\dwg\09-PH-3002 09-12-17.dwg

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

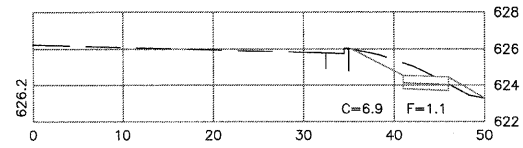
CITY OF PALOS HEIGHTS SIDEWALK IMPROVEMENTS  
CROSS SECTIONS - HARLEM AVENUE

SCALE: 1"=5'V 1"=10'H SHEET NO. 1 OF 4 SHEETS STA. 2+50 TO STA. 15+50

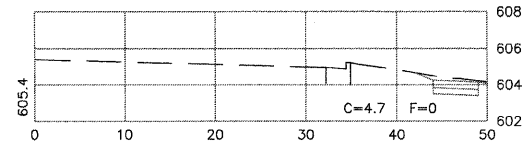
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-SW	COOK	29	11
CONTRACT NO. 63413			ILLINOIS FED. AID PROJECT	

HARLEM AVENUE CROSS SECTIONS

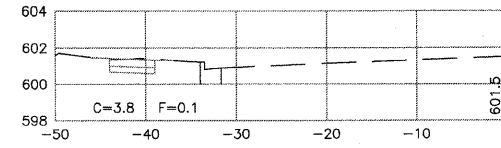
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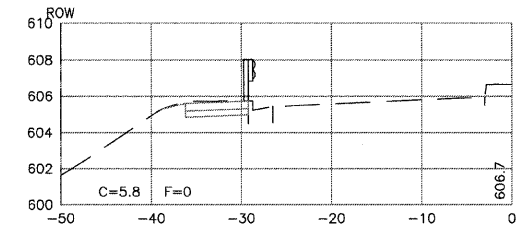
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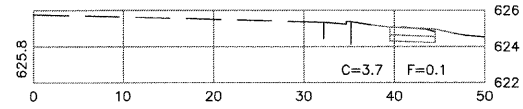
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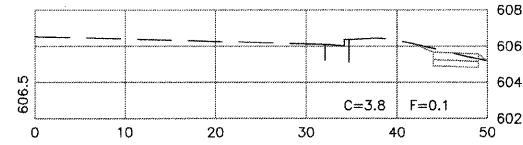
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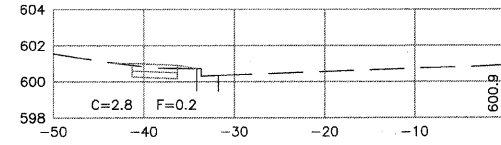
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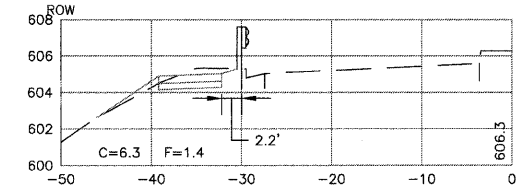
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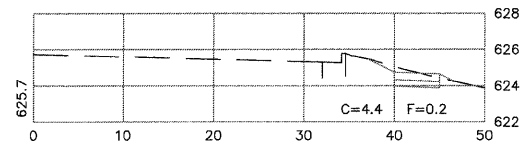
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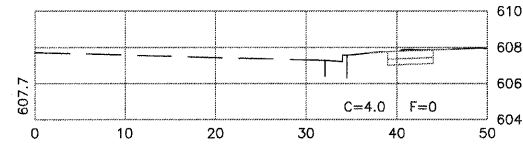
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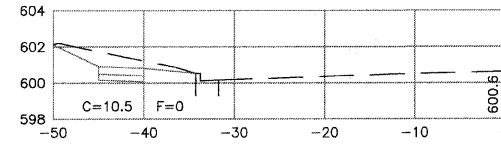
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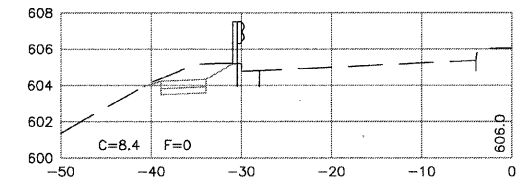
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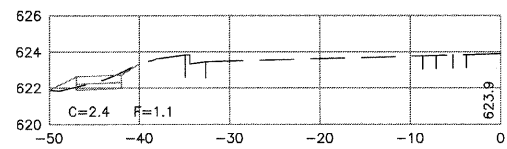
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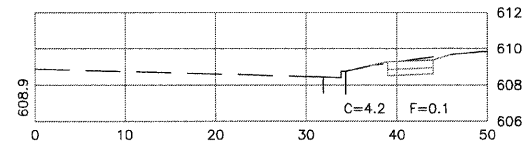
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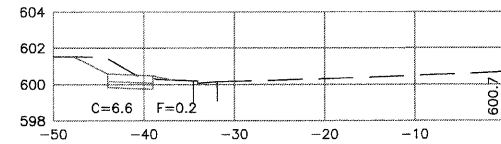
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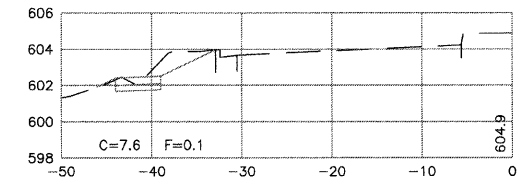
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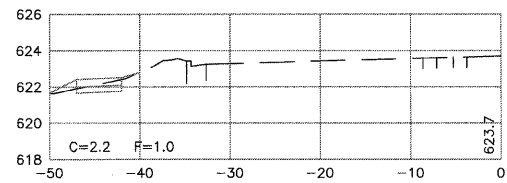
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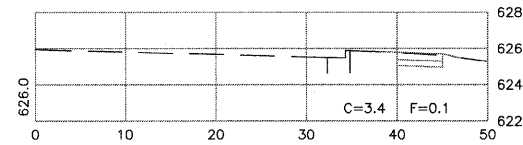
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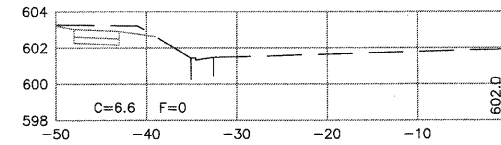
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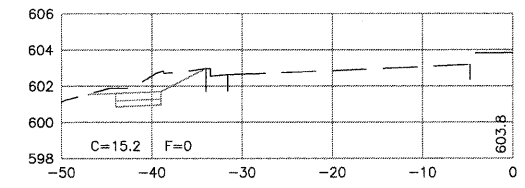
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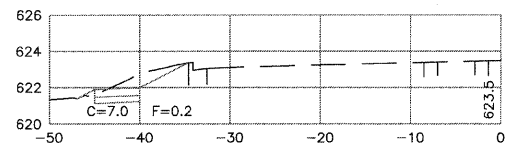
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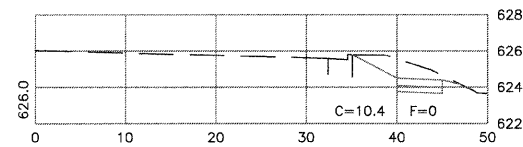
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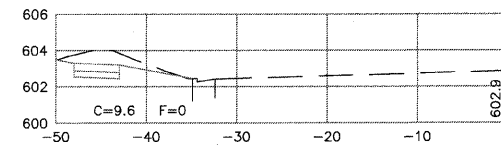
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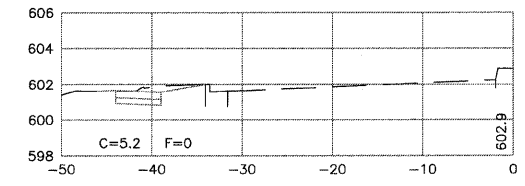
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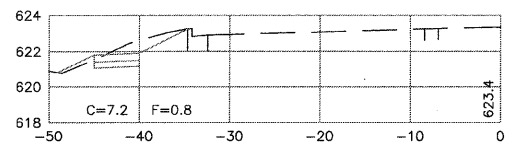
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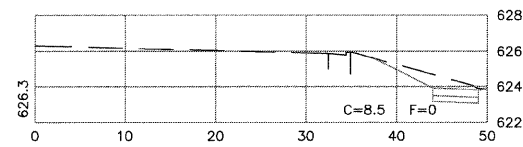
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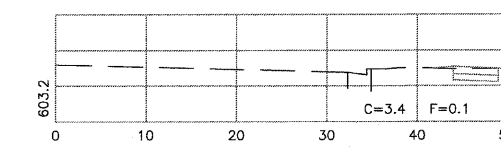
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24+50



79+50

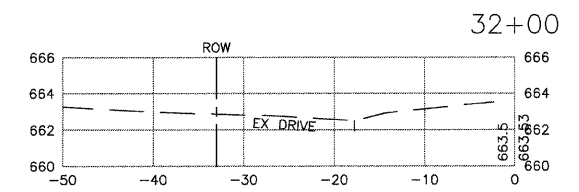
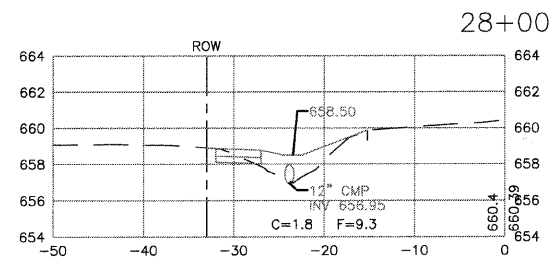
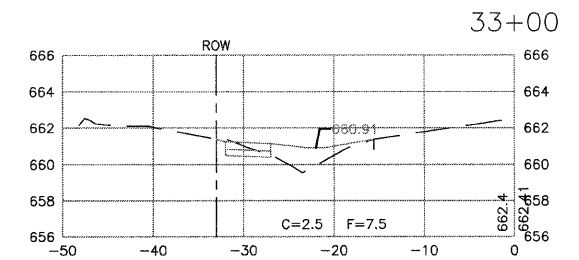
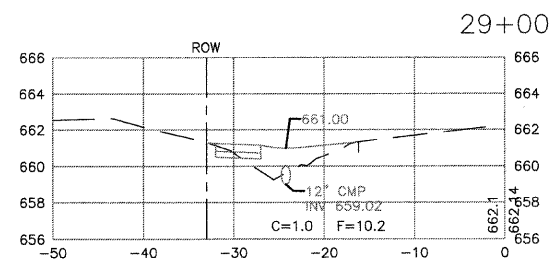
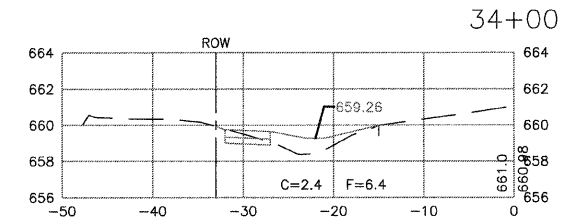
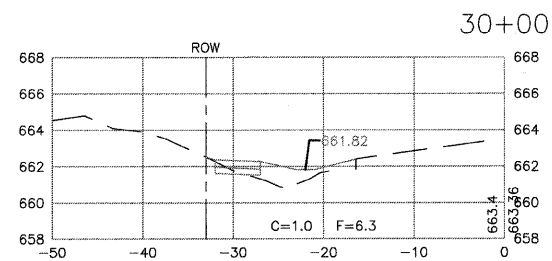
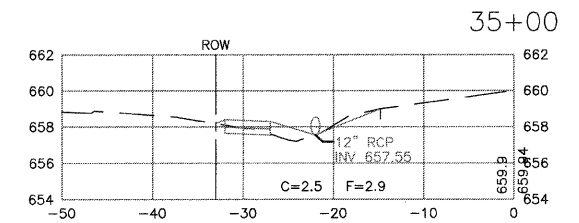
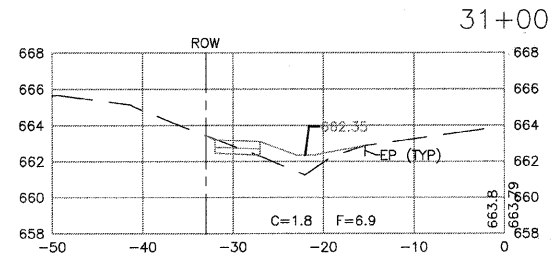


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H:\09-PH\3002\PLANS-ENG\REV-1\dwg\09-PH-3002-09-12-17.dwg	PH-3002 09-12-17.dwg	DRAWN -	REVISED -		SCALE: 1"=5' V 1"=10' H	SHEET NO. 2 OF 4 SHEETS	STA. 16+00	TO STA. 86+77	348	09-00044-00-SW	COOK	29	12
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	PLOT DATE = Dec 17, 2009	DATE -	REVISED -										

CONTRACT NO. 63413  
ILLINOIS FED. AID PROJECT

McCARTHY ROAD CROSS SECTIONS

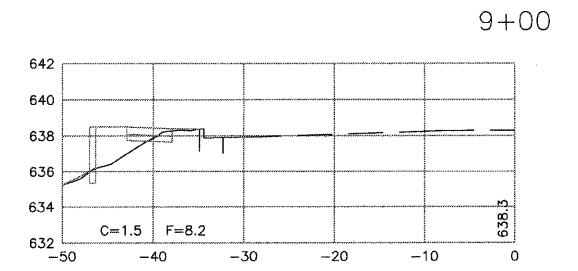
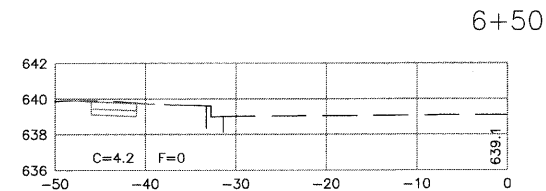
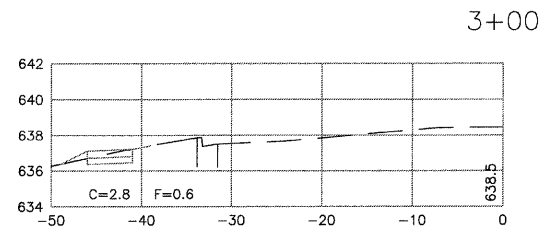
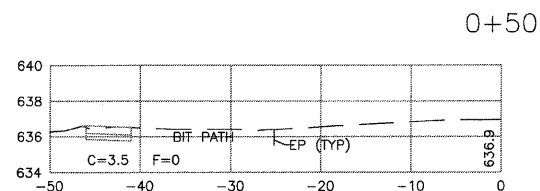
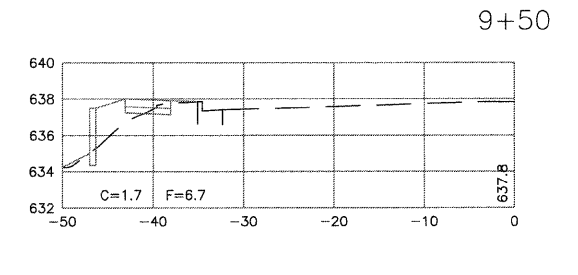
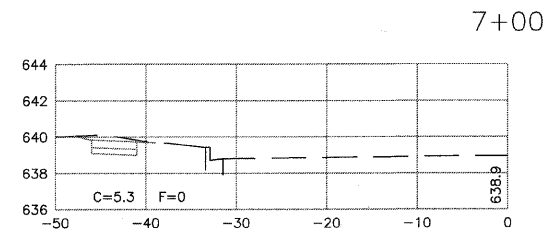
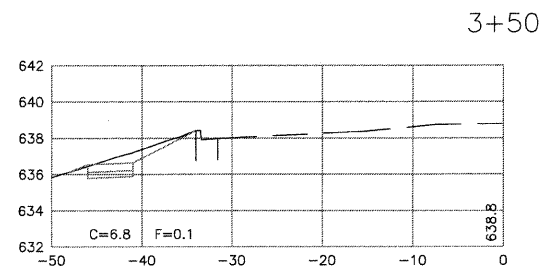
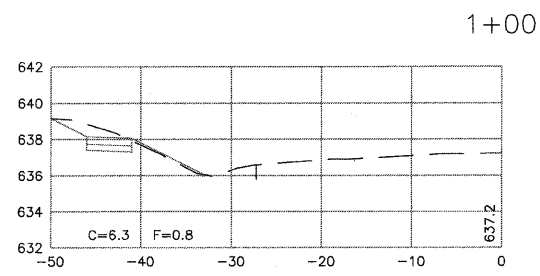
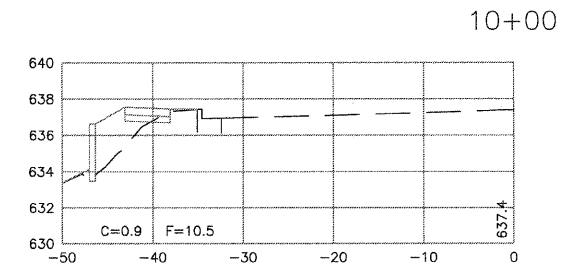
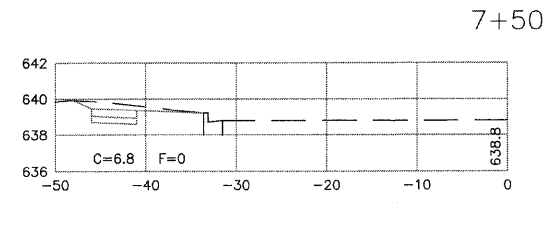
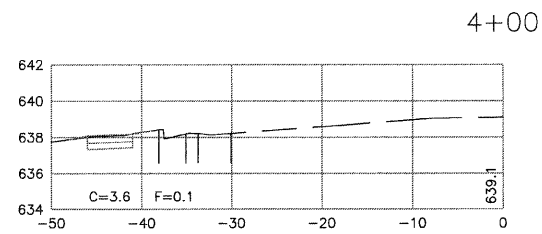
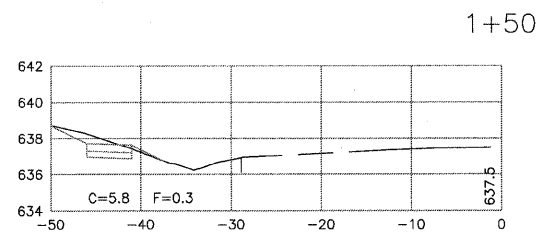
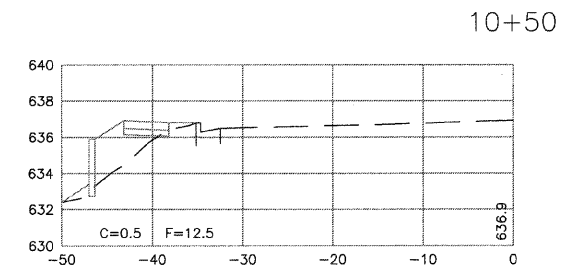
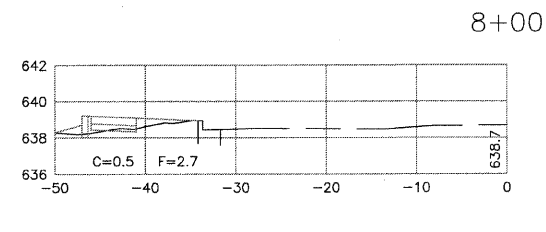
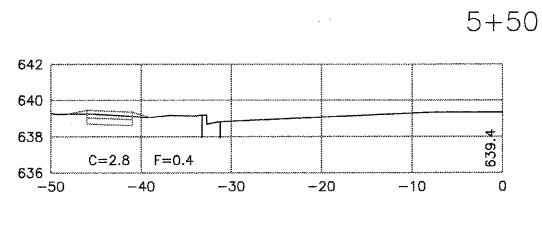
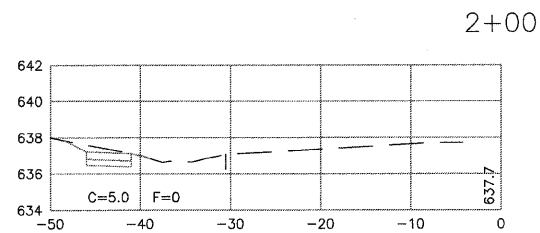
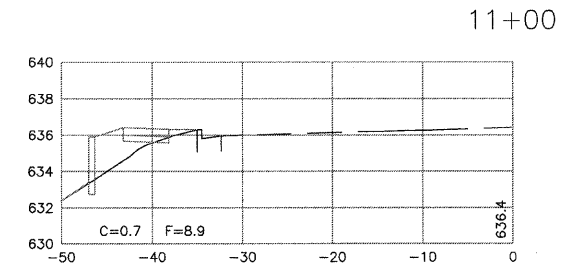
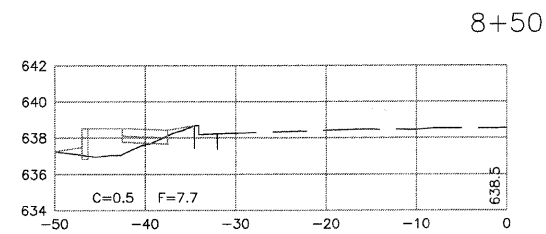
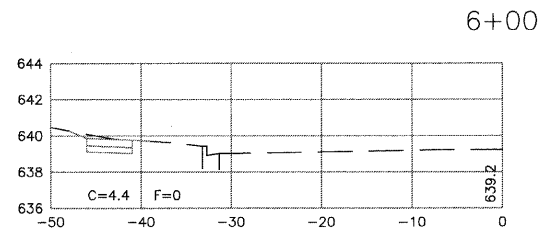
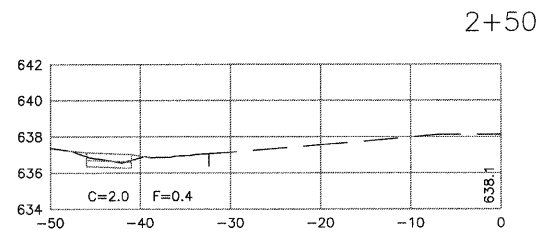


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H:\09-PH\3002\PLANS-ENG\REV-1\dwg\09-PH-3002-09-12-17.dwg		DRAWN -	REVISED -			348	09-00044-00-SW	COOK	29	13	
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PLOT DATE = Dec 17, 2009		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

SCALE: 1"=5'V 1"=10'H SHEET NO. 3 OF 4 SHEETS STA. 28+00 TO STA. 35+00

135TH STREET CROSS SECTIONS



PLOT DATE: Dec 17, 2009  
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PLOT DATE = Dec 17, 2009		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

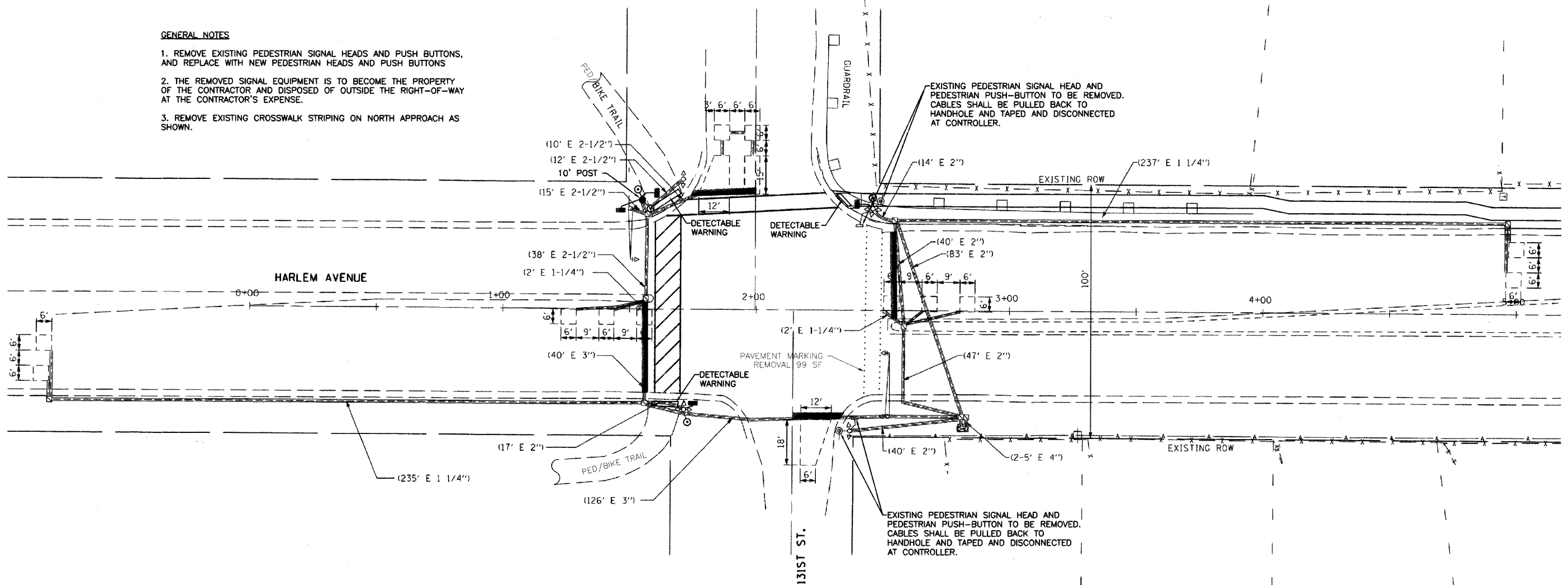
SCALE: 1"=5'V 1"=10'H SHEET NO. 4 OF 4 SHEETS STA. 0+50 TO STA. 11+00





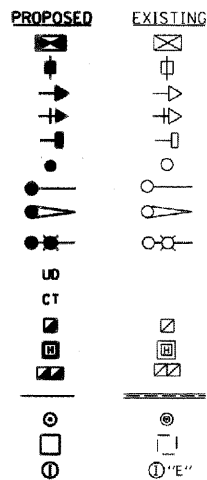
**GENERAL NOTES**

1. REMOVE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS, AND REPLACE WITH NEW PEDESTRIAN HEADS AND PUSH BUTTONS
2. THE REMOVED SIGNAL EQUIPMENT IS TO BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OUTSIDE THE RIGHT-OF-WAY AT THE CONTRACTOR'S EXPENSE.
3. REMOVE EXISTING CROSSWALK STRIPING ON NORTH APPROACH AS SHOWN.



**TRAFFIC SIGNAL LEGEND**

- CONTROLLER
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- MAST ARM ASSEMBLY AND POLE, STEEL
- MAST ARM ASSEMBLY AND POLE, ALUMINUM
- COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE
- UNIT DUCT
- COMMON TRENCH
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED
- PEDESTRIAN PUSHBUTTON DETECTOR
- DETECTOR LOOP
- CAST IRON JUNCTION BOX



- EMERGENCY VEHICLE SYSTEM DETECTOR
- CONFIRMATION BEACON
- SIGNAL HEAD, OPTICALLY PROGRAMMED
- CONDUIT SPLICE
- WOOD POLE
- RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
- VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
- RAILROAD CONTROL CABINET
- TELEPHONE CONNECTION
- POLYUREA PAVEMENT MARKING TYPE I - LINE 24"
- POLYUREA PAVEMENT MARKING TYPE I - LINE 6" 6' APART CROSSWALK LINES
- ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
- ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
- VIDEO DETECTION CAMERA (SINGLE)
- UPS-BATTERY BACK-UP

FILE NAME = H:\09-0044\09-0044-00-SW\PLANS\ENGINEERING\09-0044-00-SW-12-25.DWG  
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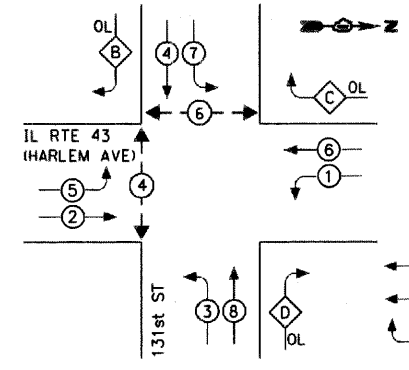
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**HARLEM AVENUE & 131ST STREET**  
**TRAFFIC SIGNAL MODIFICATION**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-0044-00-SW	COOK	29	15
CONTRACT NO. 63413				
ILLINOIS FED. AID PROJECT				

**PHASE DESIGNATION DIAGRAM**

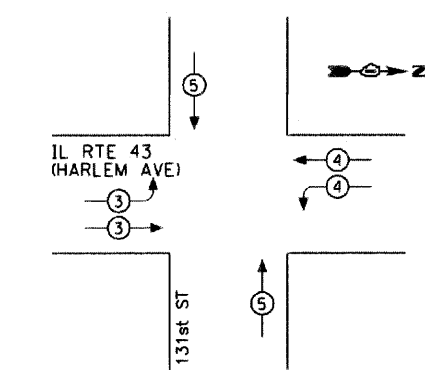


**LEGEND**  
 DUAL ENTRY PHASE  
 SINGLE ENTRY PHASE  
 OVERLAP  
 PEDESTRIAN PHASE  
 NUMBER REFERS TO ASSOCIATED PHASE

**CONTROLLER SEQUENCE**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B =	4 +	5
C =	6 +	7
D =	8 +	1

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

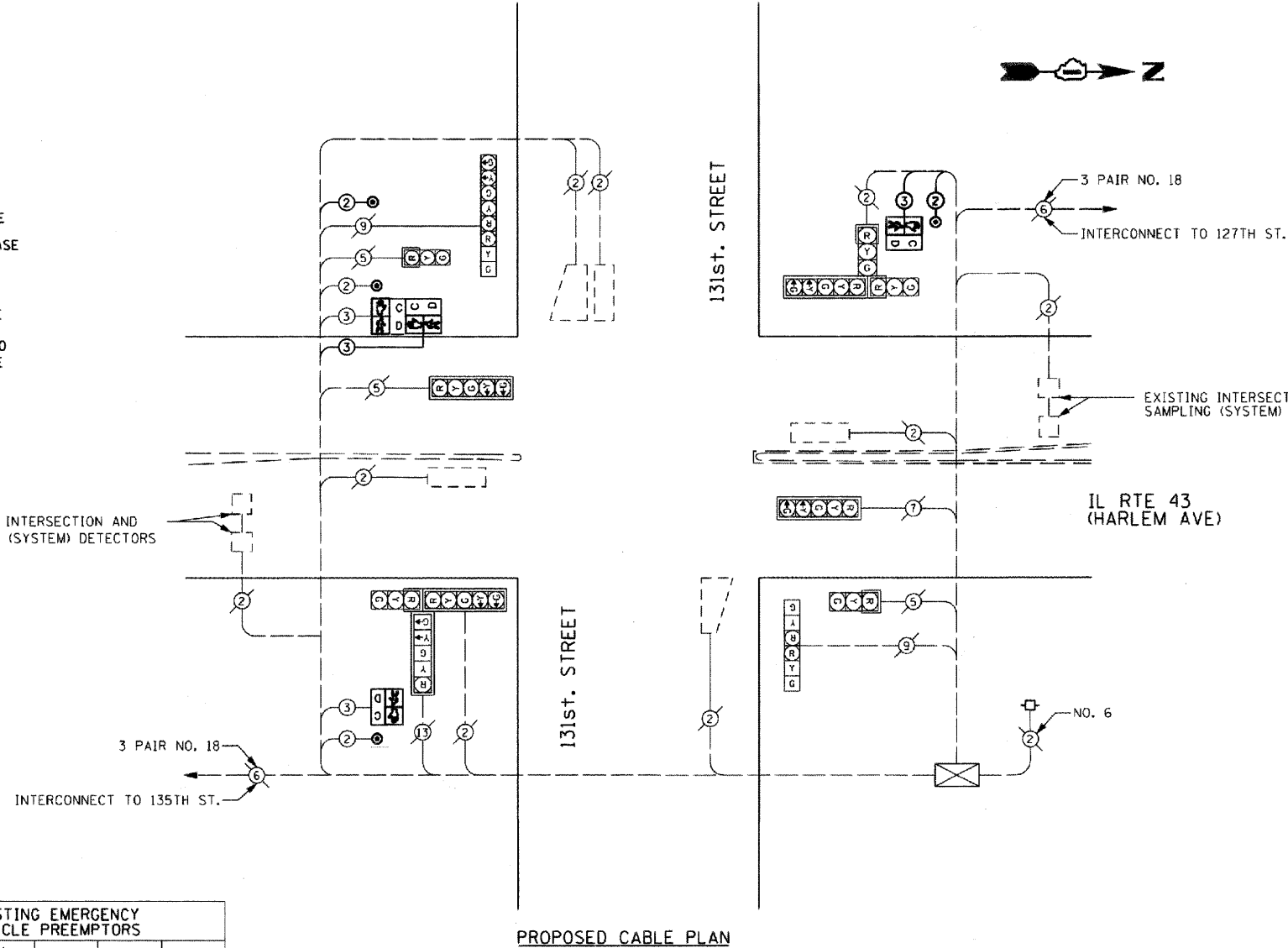


**EXISTING EMERGENCY VEHICLE PREEMPTORS**

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↑

**CABLE PLAN LEGEND**

- EXISTING PROPOSED
- 8" (200mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- CONTROLLER CABINET
- UNINTERRUPTIBLE POWER SUPPLY (UPS)
- SERVICE INSTALLATION
- TELEPHONE CONNECTION
- VEHICLE DETECTOR, INDUCTION LOOP
- MAGNETIC DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSHBUTTON DETECTOR
- 2 DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- 1 GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
- 24 FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F
- SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
- RAILROAD CONTROL CABINET
- ILLUMINATED SIGN "NO LEFT TURN"
- ILLUMINATED SIGN "NO RIGHT TURN"
- GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
- GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- VIDEO VEHICLE SENSOR



**PROPOSED CABLE PLAN**

**SCHEDULE OF QUANTITIES**

QTY	UNIT	ITEM DESCRIPTION
360	SQ. FT.	THERMOPLASTIC PAVEMENT MARKING—LETTERS AND SYMBOLS
388	FOOT	THERMOPLASTIC PAVEMENT MARKING—LINE 6"
105	FOOT	THERMOPLASTIC PAVEMENT MARKING—LINE 12"
119	FOOT	THERMOPLASTIC PAVEMENT MARKING—LINE 24"
320	SQ. FT.	THERMOPLASTIC PAVEMENT MARKING REMOVAL
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
860	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
850	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 10 FT.
2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	MODIFY EXISTING CONTROLLER

**L.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

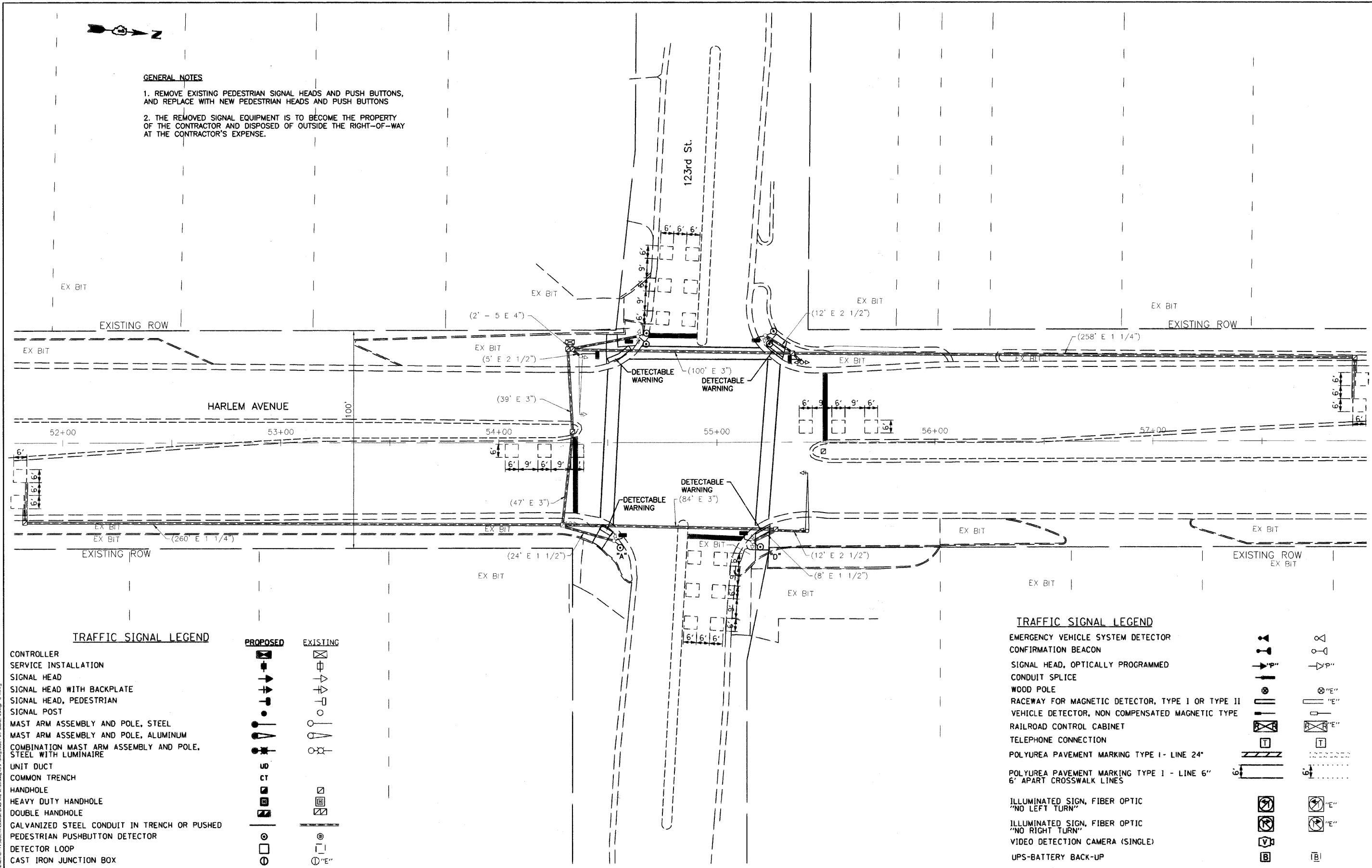
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14		17	0.50	119.0
(YELLOW)	14		25	0.25	87.5
(GREEN)	14		15	0.25	52.5
ARROW	12		12	0.10	14.4
PED. SIGNAL	6		25	1.00	150.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN				0.05	
<b>FLASHER</b>				0.50	
<b>ENERGY COSTS TO:</b>					<b>TOTAL = 523.4</b>
ILLINOIS DEPARTMENT OF TRANSPORTATION 201 WEST CENTER COURT SCHAUMBURG, ILLINOIS 60196-1096 ENERGY SUPPLY CONTACT: Ms. DOLORES KREMNIETZ PHONE: (815) 724-5241 COMPANY: COMED-EDISON					

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'-L-2"
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m+L-0.6m)=	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

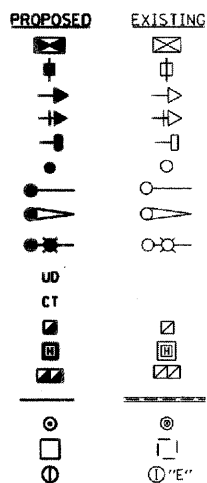


**GENERAL NOTES**

1. REMOVE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS, AND REPLACE WITH NEW PEDESTRIAN HEADS AND PUSH BUTTONS
2. THE REMOVED SIGNAL EQUIPMENT IS TO BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OUTSIDE THE RIGHT-OF-WAY AT THE CONTRACTOR'S EXPENSE.



- CONTROLLER
- SERVICE INSTALLATION
- SIGNAL HEAD
- SIGNAL HEAD WITH BACKPLATE
- SIGNAL HEAD, PEDESTRIAN
- SIGNAL POST
- MAST ARM ASSEMBLY AND POLE, STEEL
- MAST ARM ASSEMBLY AND POLE, ALUMINUM
- COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE
- UNIT DUCT
- COMMON TRENCH
- HANDHOLE
- HEAVY DUTY HANDHOLE
- DOUBLE HANDHOLE
- GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED
- PEDESTRIAN PUSHBUTTON DETECTOR
- DETECTOR LOOP
- CAST IRON JUNCTION BOX



**TRAFFIC SIGNAL LEGEND**

- EMERGENCY VEHICLE SYSTEM DETECTOR
- CONFIRMATION BEACON
- SIGNAL HEAD, OPTICALLY PROGRAMMED
- CONDUIT SPLICE
- WOOD POLE
- RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
- VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
- RAILROAD CONTROL CABINET
- TELEPHONE CONNECTION
- POLYUREA PAVEMENT MARKING TYPE I - LINE 24"
- POLYUREA PAVEMENT MARKING TYPE I - LINE 6" 6' APART CROSSWALK LINES
- ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
- ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
- VIDEO DETECTION CAMERA (SINGLE)
- UPS-BATTERY BACK-UP

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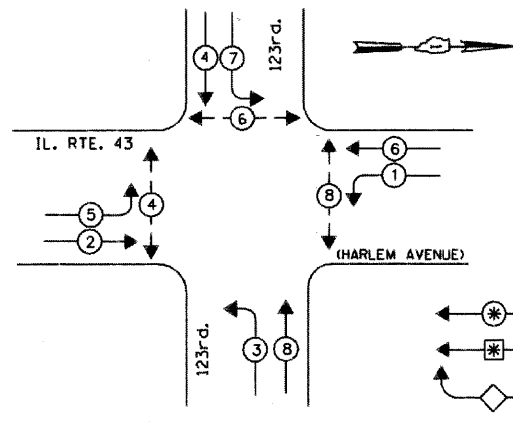
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HARLEM AVENUE & 123RD STREET  
TRAFFIC SIGNAL MODIFICATIONS**

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

F.A.P. RTE. 348	SECTION 09-00044-00-SW	COUNTY COOK	TOTAL SHEETS 29	SHEET NO. 17
CONTRACT NO. 63413				
ILLINOIS FED. AID PROJECT				

**PHASE DESIGNATION DIAGRAM**

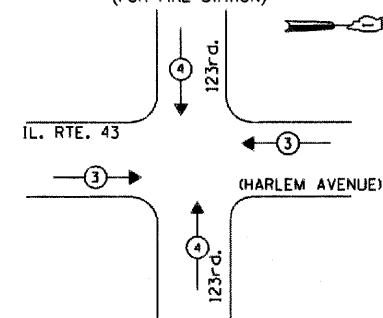


**LEGEND**

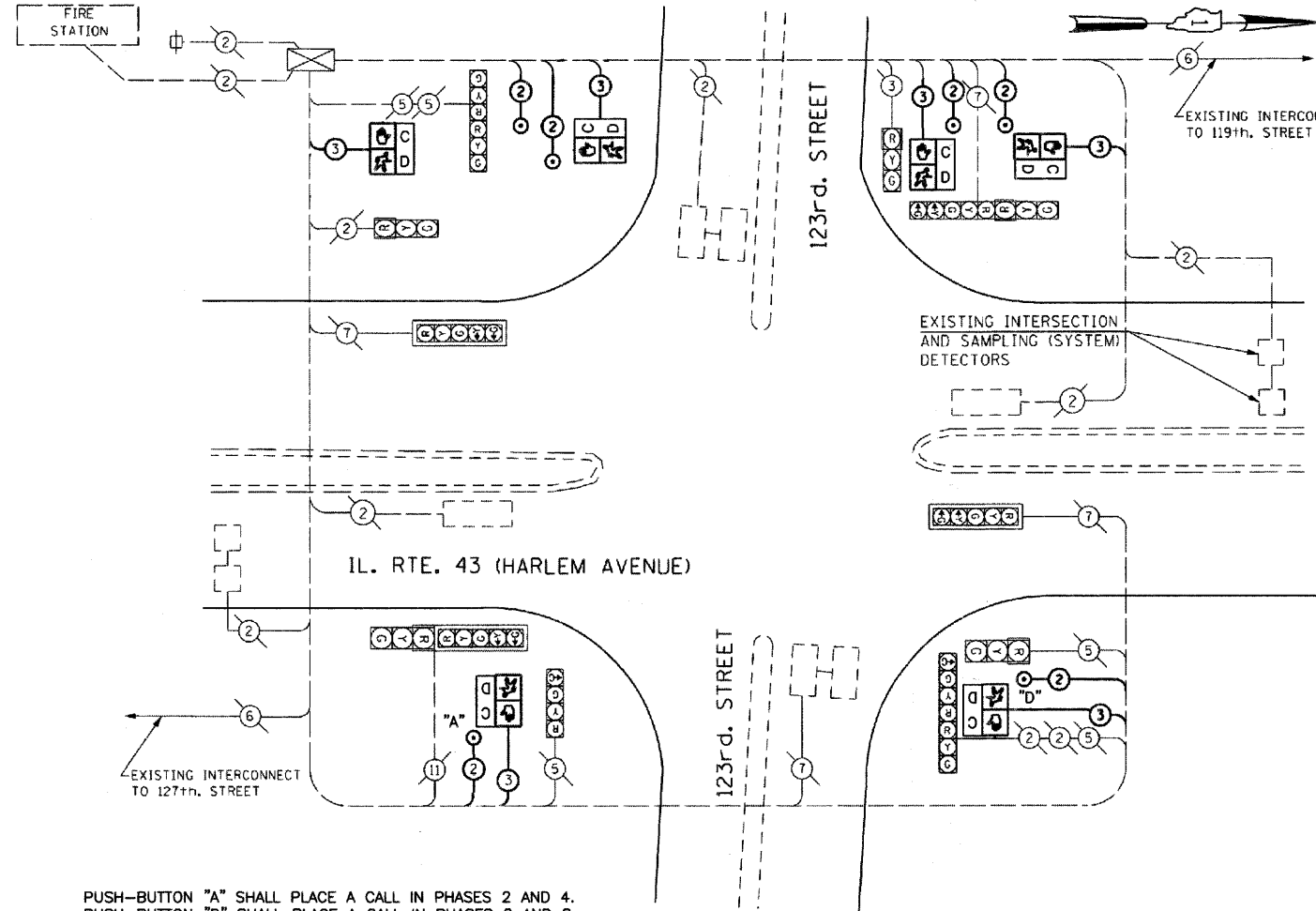
- ← \* → DUAL ENTRY PHASE
- ← \* → SINGLE ENTRY PHASE
- ◊ O.L. OVERLAP
- ← \* → PEDESTRIAN PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE

**CONTROLLER SEQUENCE**

**EMERGENCY VEHICLE PREEMPTION SEQUENCE (FOR FIRE STATION)**



PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	MOVEMENT
3	← →
4	↑ ↓



**CABLE PLAN NOT TO SCALE**

PUSH-BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4.  
PUSH-BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8.

**CABLE PLAN LEGEND**

- | EXISTING | PROPOSED   |
|----------|--|
|          | <b>G</b> 8" (200mm) TRAFFIC SIGNAL SECTION   |
|          | <b>R</b> 12" (300mm) TRAFFIC SIGNAL SECTION  |
|          | <b>W</b> 12" (300mm) PEDESTRIAN SIGNAL SECTION   |
|          | <b>C</b> 12" (300mm) PEDESTRIAN SIGNAL SECTION   |
|          | <b>C</b> CONTROLLER CABINET  |
|          | <b>S</b> SERVICE INSTALLATION  |
|          | <b>T</b> TELEPHONE INSTALLATION  |
|          | <b>V</b> VEHICLE DETECTOR, INDUCTION LOOP  |
|          | <b>M</b> MAGNETIC DETECTOR   |
|          | <b>E</b> EMERGENCY VEHICLE LIGHT DETECTOR  |
|          | <b>B</b> CONFIRMATION BEACON   |
|          | <b>P</b> PUSH-BUTTON DETECTOR  |
|          | <b>2</b> DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
|          | <b>1</b> GROUND CABLE IN CONDUIT NO.6 SOLID COPPER (GREEN)   |
|          | <b>24</b> FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MMI2F & SM12F  |
|          | <b>R</b> SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.  |
|          | <b>R</b> RAILROAD CONTROL CABINET  |
|          | <b>E</b> ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"  |
|          | <b>E</b> ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"   |
|          | <b>H/C</b> GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER  |
|          | <b>P</b> GROUND ROD AT POST OR MAST ARM POLE   |
|          | <b>S</b> GROUND ROD AT ELECTRIC SERVICE INSTALLATION   |
|          | <b>V</b> VIDEO DETECTION CAMERA (SINGLE)   |
|          | <b>B</b> UPS - BATTERY BACK-UP SYSTEM  |

**SCHEDULE OF QUANTITIES**

QTY	UNIT	ITEM DESCRIPTION
480	SQ. FT.	THERMOPLASTIC PAVEMENT MARKING-LETTERS AND SYMBOLS
409	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 6"
110	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
760	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
750	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
6	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
6	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	MODIFY EXISTING CONTROLLER

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE		%OPERATION	
		INCAND.	LED		
SIGNAL (RED)	14	135	17	0.50	119.0
(YELLOW)	14	135	25	0.25	87.5
(GREEN)	14	135	15	0.25	52.5
ARROW	10	135	12	0.10	12.0
PED. SIGNAL	6	90	25	1.00	150.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	
FLASHER				0.50	
TOTAL =					421.0

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A-POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
E-M.ARM POLE	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'4L-2' (6m+L-0.6m)
24" (600mm)	10 (3.0)	SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
		FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

ENERGY COSTS TO:  
ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 WEST CENTER COURT  
SCHAUMBURG, ILLINOIS 60196-1096  
ENERGY SUPPLY CONTACT: Ms. DOLORES KREMNIETZ  
PHONE: (815) 724-5241  
COMPANY: COMED-EDISON

FILE NAME = USER NAME = #USER#  
DESIGNED - REVISIONS -  
DRAWN - REVISIONS -  
CHECKED - REVISIONS -  
DATE - REVISIONS -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION  
DIAGRAM, IL. 43 (HARLEM AVE.) AND 123RD STREET

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-5W	COOK	29	18
CONTRACT NO. 63413				
ILLINOIS FED. AID PROJECT				

PLOT DATE: Dec 24, 2009 FILENAME: I:\P1\PH0302\PAINTS-ENG\REV-1\TMS03-09-PH-002 09-12-28.rvt

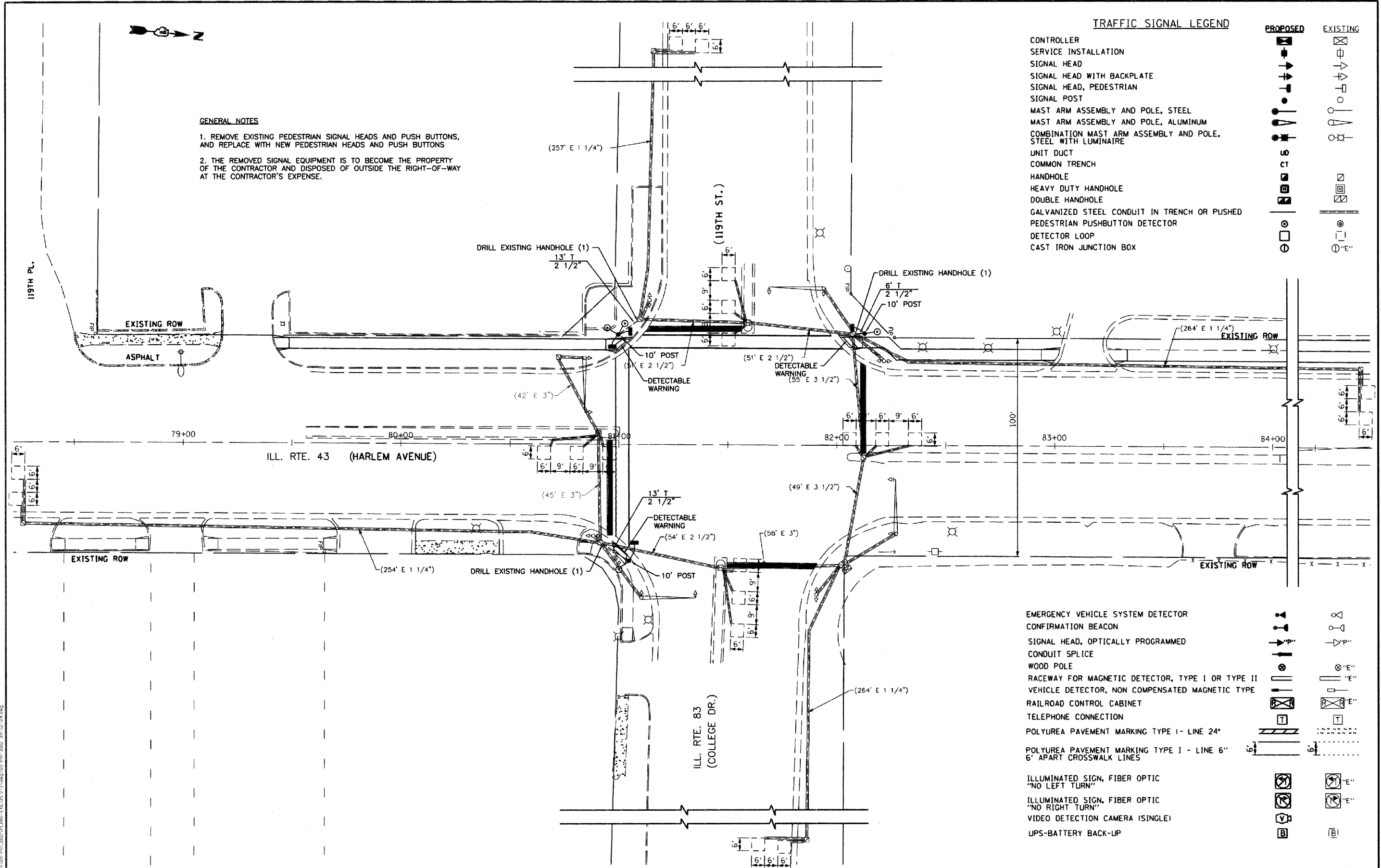


**GENERAL NOTES**

1. REMOVE EXISTING PEDESTRIAN SIGNAL HEADS AND PUSH BUTTONS, AND REPLACE WITH NEW PEDESTRIAN HEADS AND PUSH BUTTONS
2. THE REMOVED SIGNAL EQUIPMENT IS TO BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OUTSIDE THE RIGHT-OF-WAY AT THE CONTRACTOR'S EXPENSE.

**TRAFFIC SIGNAL LEGEND**

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMBINATION MAST ARM ASSEMBLY AND POLE, STEEL WITH LUMINAIRE		
UNIT DUCT		
COMMON TRENCH		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD, OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
TELEPHONE CONNECTION		
POLYUREA PAVEMENT MARKING TYPE I - LINE 24"		
POLYUREA PAVEMENT MARKING TYPE I - LINE 6" 6' APART CROSSWALK LINES		
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		
VIDEO DETECTION CAMERA (SINGLE)		
UPS-BATTERY BACK-UP		



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		DATE -	REVISED -

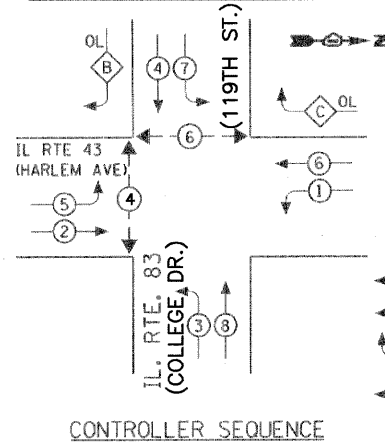
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ILL. RTE. 43 (HARLEM AVE.) & ILL. RTE. 83 (119TH ST.)**  
**TRAFFIC SIGNAL MODIFICATIONS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-SW	COOK	29	19
CONTRACT NO. 63413			ILLINOIS FED. AID PROJECT	

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

PHASE DESIGNATION DIAGRAM



LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

CONTROLLER SEQUENCE

CABLE PLAN LEGEND

- |          |          |   |
|----------|----------|---|
| EXISTING | PROPOSED |   |
|          |          | 8" (200mm) TRAFFIC SIGNAL SECTION   |
|          |          | 12" (300mm) TRAFFIC SIGNAL SECTION  |
|          |          | 12" (300mm) PEDESTRIAN SIGNAL SECTION   |
|          |          | 12" (300mm) PEDESTRIAN SIGNAL SECTION   |
|          |          | CONTROLLER CABINET  |
|          |          | UNINTERRUPTIBLE POWER SUPPLY (UPS)  |
|          |          | SERVICE INSTALLATION  |
|          |          | TELEPHONE CONNECTION  |
|          |          | VEHICLE DETECTOR, INDUCTION LOOP  |
|          |          | MAGNETIC DETECTOR   |
|          |          | EMERGENCY VEHICLE LIGHT DETECTOR  |
|          |          | CONFIRMATION BEACON   |
|          |          | PUSHBUTTON DETECTOR   |
|          |          | 2 DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
|          |          | 1 GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)  |
|          |          | 24 FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F  |
|          |          | SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.  |
|          |          | RAILROAD CONTROL CABINET  |
|          |          | ILLUMINATED SIGN "NO LEFT TURN"   |
|          |          | ILLUMINATED SIGN "NO RIGHT TURN"  |
|          |          | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HH), OR CONTROLLER (C)   |
|          |          | GROUND ROD AT POST (P) OR MAST ARM POLE (MA)  |
|          |          | GROUND ROD AT ELECTRIC SERVICE INSTALLATION   |
|          |          | VIDEO VEHICLE SENSOR  |

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

3 PAIR NO. 18

INTERCONNECT TO 123rd STREET

IL RTE 43

PROPOSED CABLE PLAN

IL RTE. 83 (COLLEGE DR.)

(HARLEM AVE)

(119TH ST.)

3 PAIR NO. 18

INTERCONNECT TO 115th STREET

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16		17	0.50	136.0
(YELLOW)	16		25	0.25	100.0
(GREEN)	16		15	0.25	60.0
ARROW	16		12	0.10	19.2
PED. SIGNAL	4		25	1.00	100.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN				0.05	

FLASHER 0.50  
 ENERGY COSTS TO: TOTAL = 515.2  
 ILLINOIS DEPARTMENT OF TRANSPORTATION  
 201 WEST CENTER COURT  
 SCHAUMBURG, ILLINOIS 60196-1096  
 ENERGY SUPPLY CONTACT: Ms. DOLORES KREMNITZER  
 PHONE: (815) 724-5241  
 COMPANY: COMED-EDISON

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'±-2"
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(6m±L-0.6m)±	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

SCHEDULE OF QUANTITIES

QTY	UNIT	ITEM DESCRIPTION
480	SQ. FT.	THERMOPLASTIC PAVEMENT MARKING-LETTERS AND SYMBOLS
353	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 6"
166	FOOT	THERMOPLASTIC PAVEMENT MARKING-LINE 24"
32	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
32	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
900	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
890	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
3	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
3	EACH	CONCRETE FOUNDATION, TYPE A
3	EACH	DRILL EXISTING HANDHOLE
2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	MODIFY EXISTING CONTROLLER

PLOT DATE: Dec 17, 2009 FILENAME: HARLEM-119TH-TRAFFIC-SIGNAL-INSTALLATION-119th-09-12-17.dwg

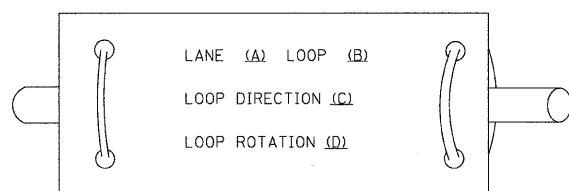
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		DRAWN: -	REVISED: -			348	09-00044-00-SW	COOK	29	20	
PLOT SCALE: #SCALE#		CHECKED: -	REVISED: -			CONTRACT NO. 63413					
PLOT DATE: #DATE#		DATE: -	REVISED: -			ILLINOIS/FED. AID PROJECT					



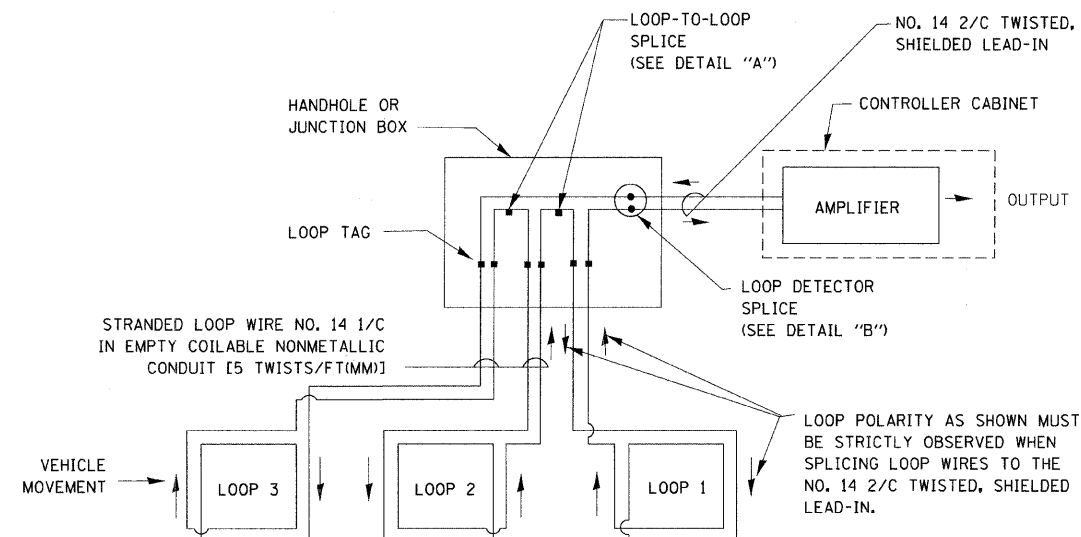
## LOOP DETECTOR NOTES

1. 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.
2. 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.
3. 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.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES 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.
6. 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.
7. 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.

### LOOP LEAD-IN CABLE TAG

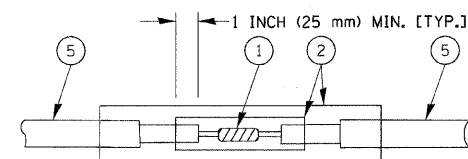


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

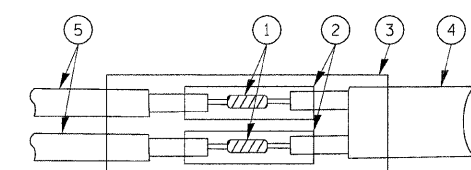


### DETECTOR LOOP WIRING SCHEMATIC

- 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.

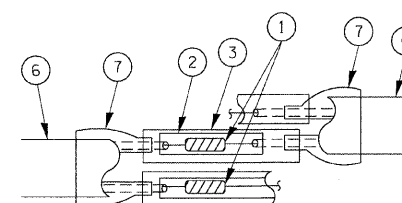


DETAIL "A"  
LOOP-TO-LOOP SPLICE

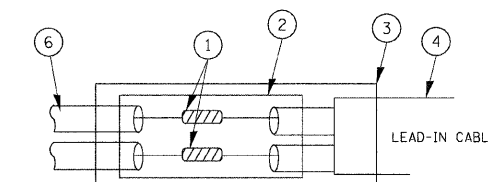


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

### TYPE I LOOP



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

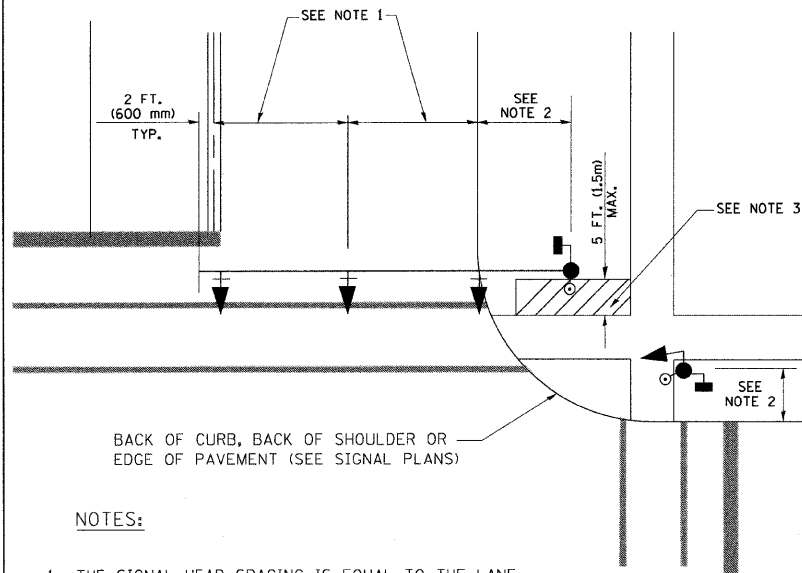
### LOOP DETECTOR SPLICE

- ① WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.
- ② WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- ③ WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- ④ NO. 14 2/C TWISTED, SHIELDED CABLE.
- ⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- ⑥ PRE-FORMED LOOP
- ⑦ XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = kenthphixajbc	DESIGNED - DAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\p\work\PMWIDOT\KANTHAPHIXAYBC\d01126	4\traffic\legend.v7.dgn	DRAWN - BCK	REVISED -			348	09-00044-00-SW	COOK	29	21	
PLOT SCALE = 28,00000 // IN.		CHECKED - DAD	REVISED -			CONTRACT NO. 63413					
PLOT DATE = 10/6/2009		DATE - 10/28/09	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
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**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST**

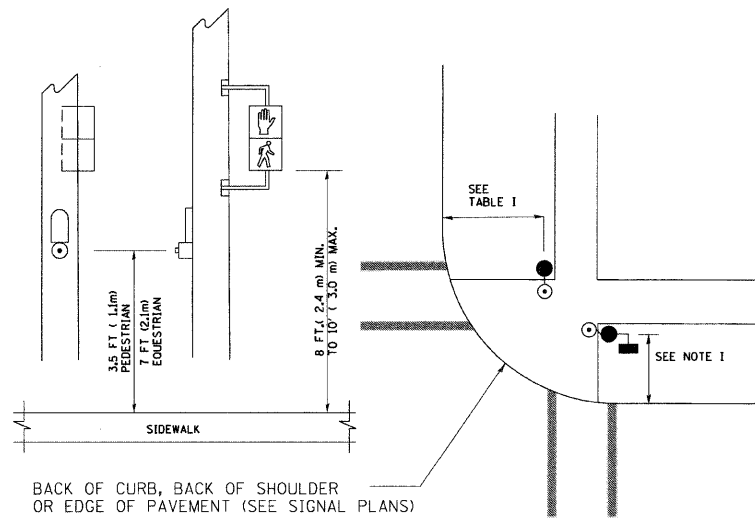
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



**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."

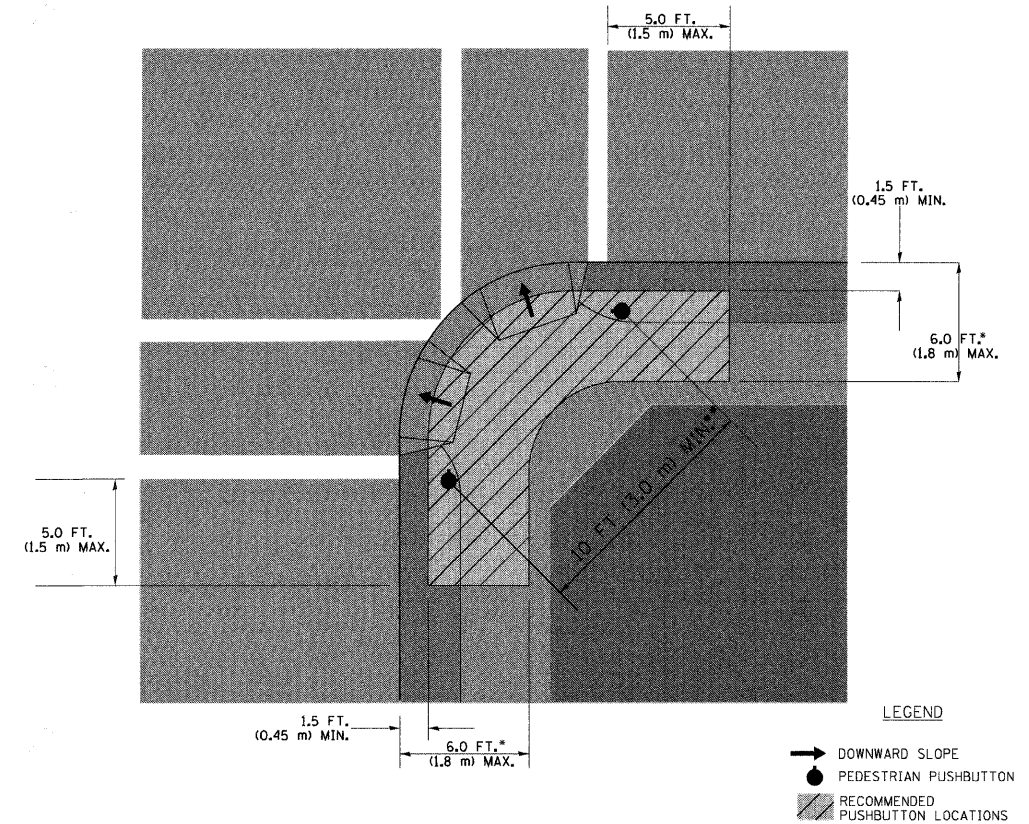
**PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST**



**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**



- 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:**

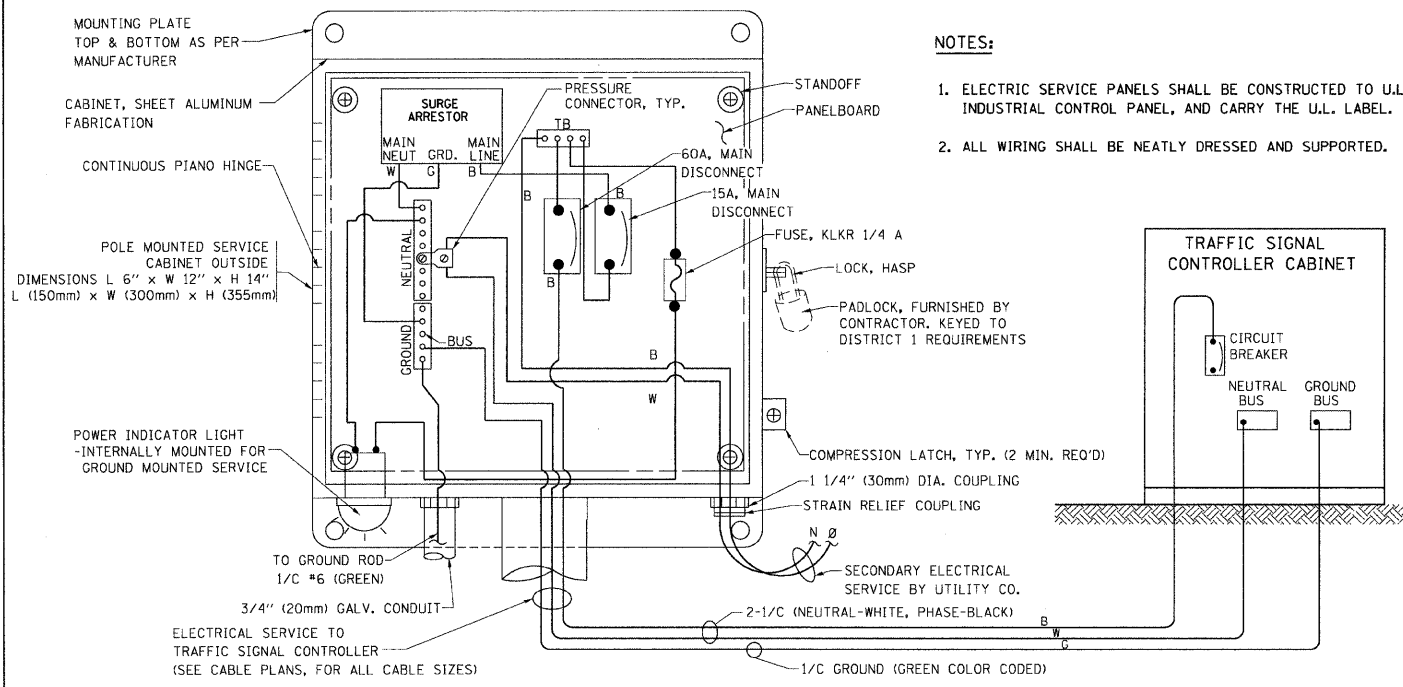
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM 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**

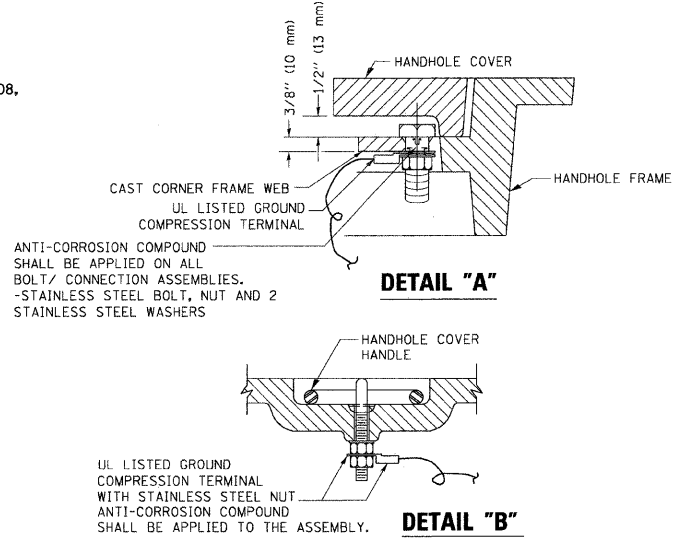
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 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:**

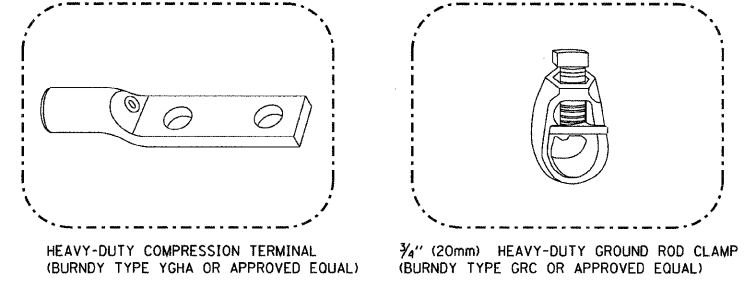
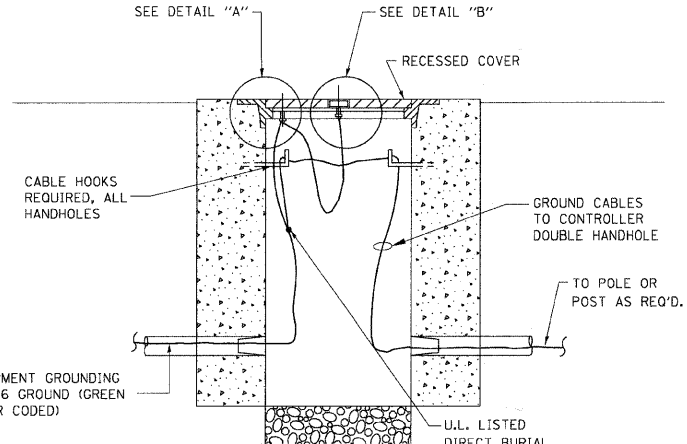
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM 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 EFFECT 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.



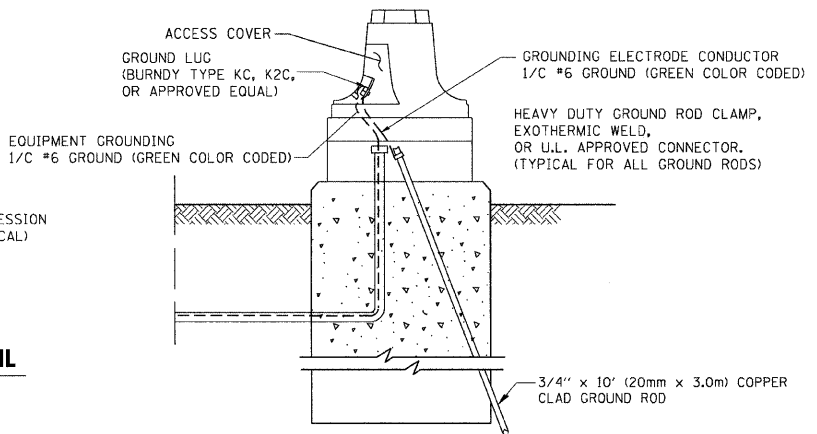
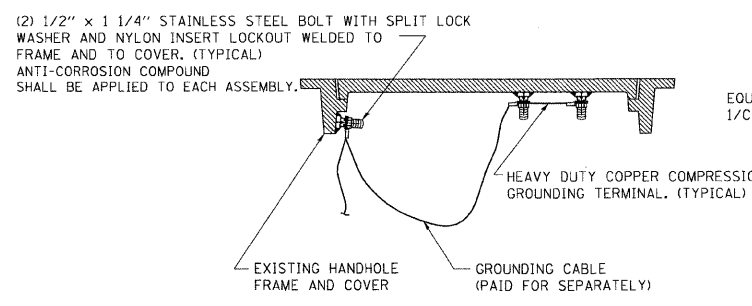
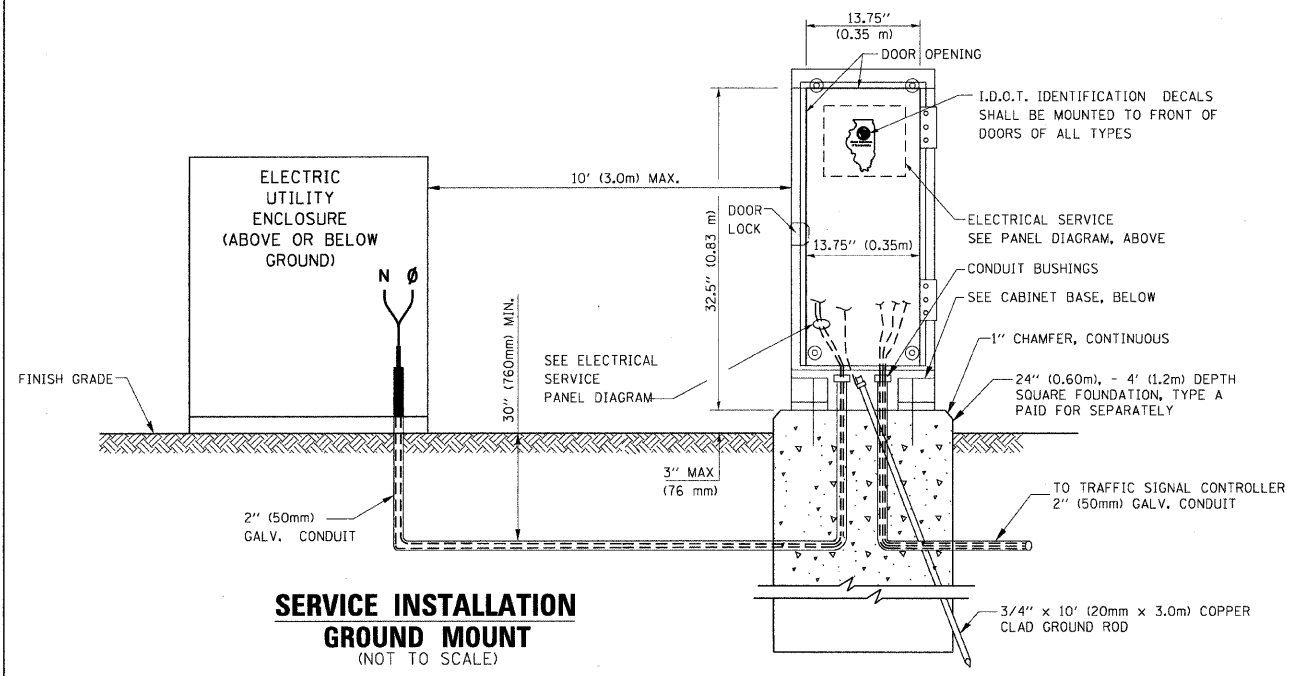
**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)**  
**SERVICE INSTALLATION POLE MOUNT (SHOWN)**  
 (NOT TO SCALE)



- 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.

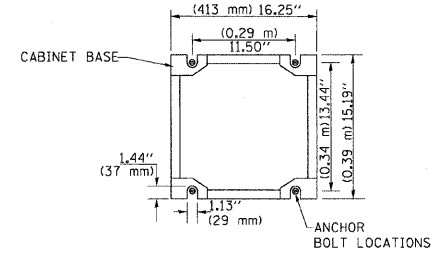


- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, U.L. APPROVED.
  - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES. 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES. 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

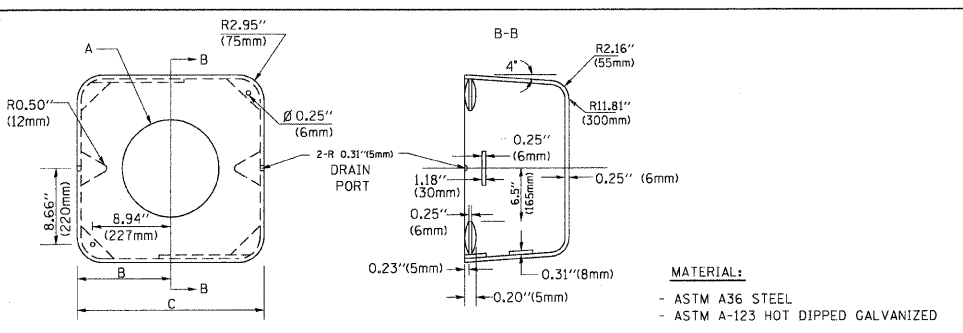
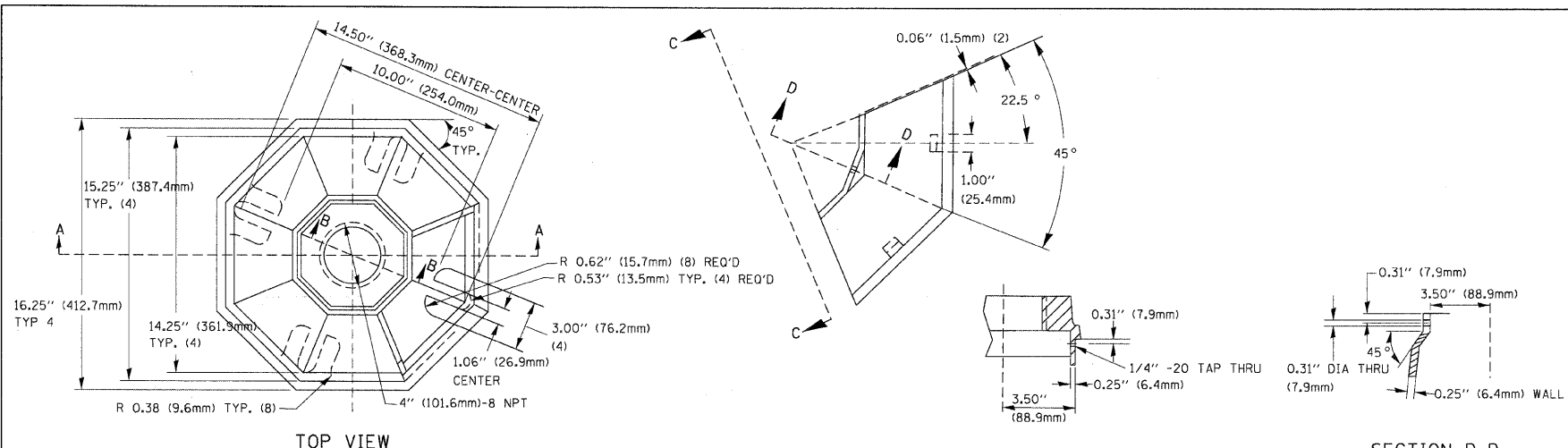


**SERVICE INSTALLATION GROUND MOUNT**  
 (NOT TO SCALE)

**CABINET - BASE BOLT PATTERN**  
 (NOT TO SCALE)



FILE NAME =	USER NAME = kanthphxaybc	DESIGNED - DAD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>		F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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PLOT DATE = 10/6/2009		DATE - 10/28/09	REVISED -		FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT				

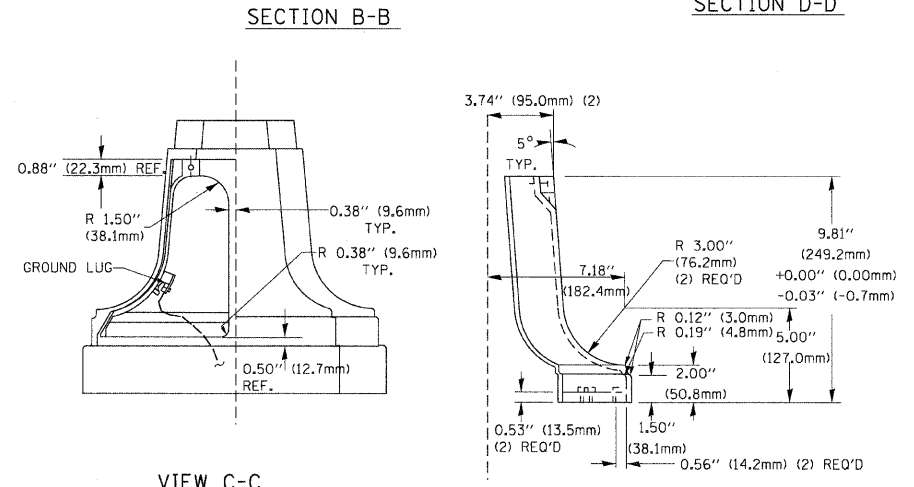
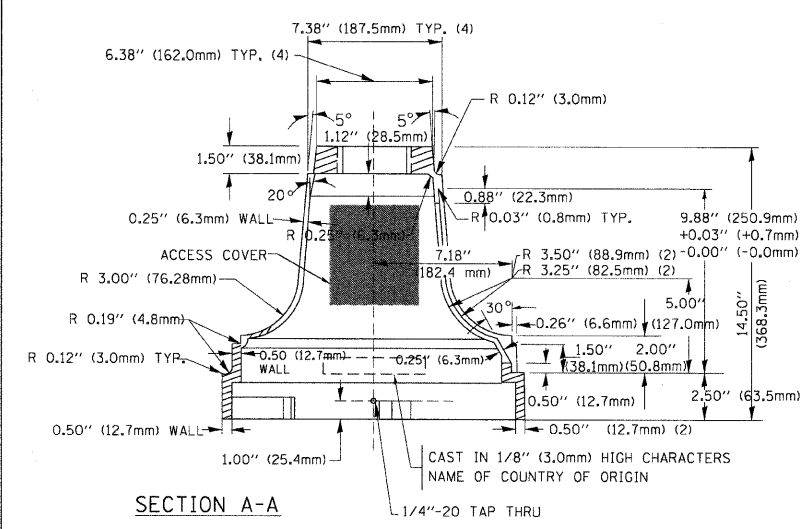


A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIABLES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIABLES	18.5\" (470mm)	37\" (940mm)	7\"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

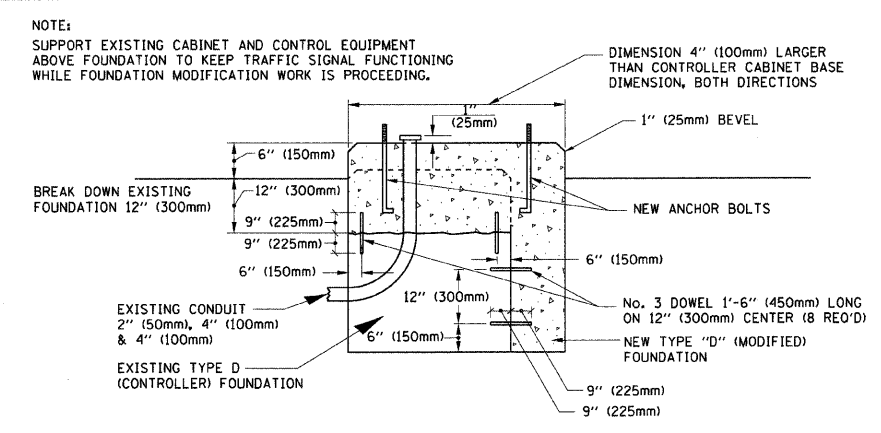
**SHROUD**

**NOTES:**

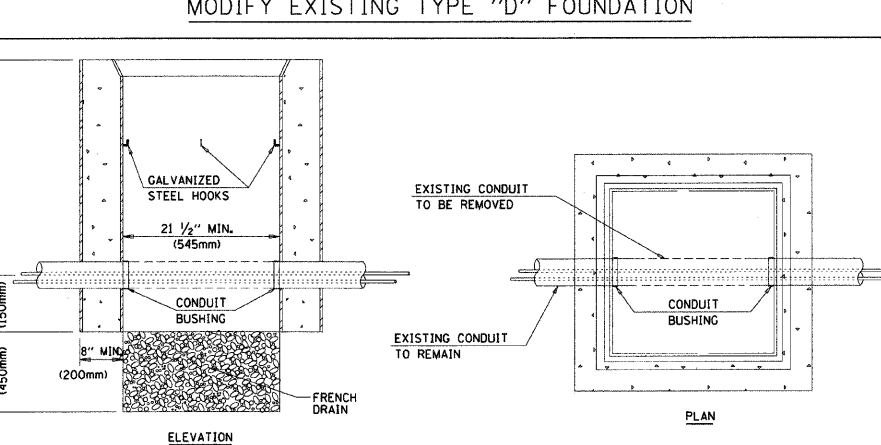
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



**TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A**



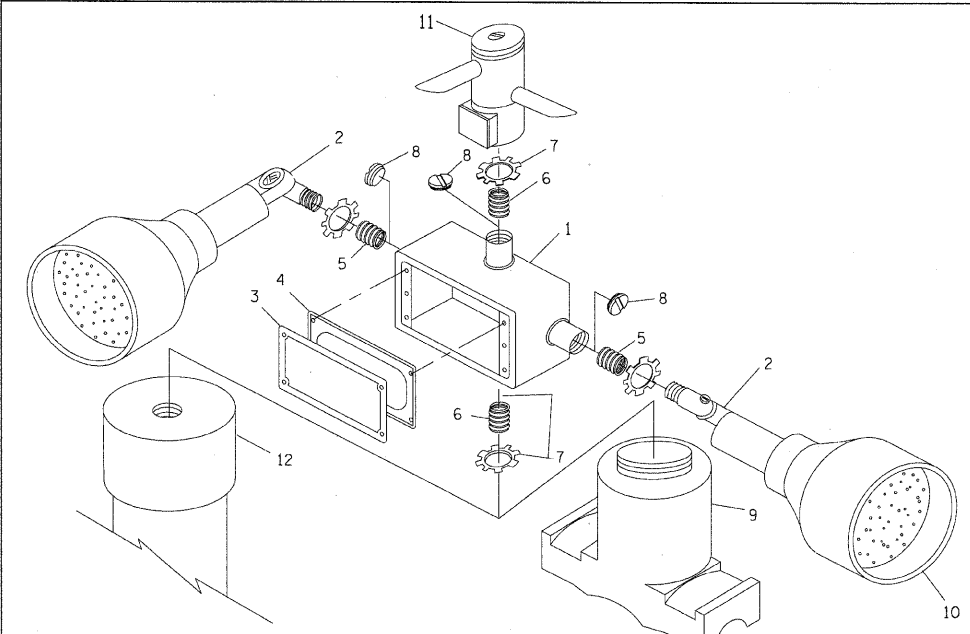
**MODIFY EXISTING TYPE "D" FOUNDATION**



**NOTES:**

- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

**HANDHOLE TO INTERCEPT EXISTING CONDUIT**

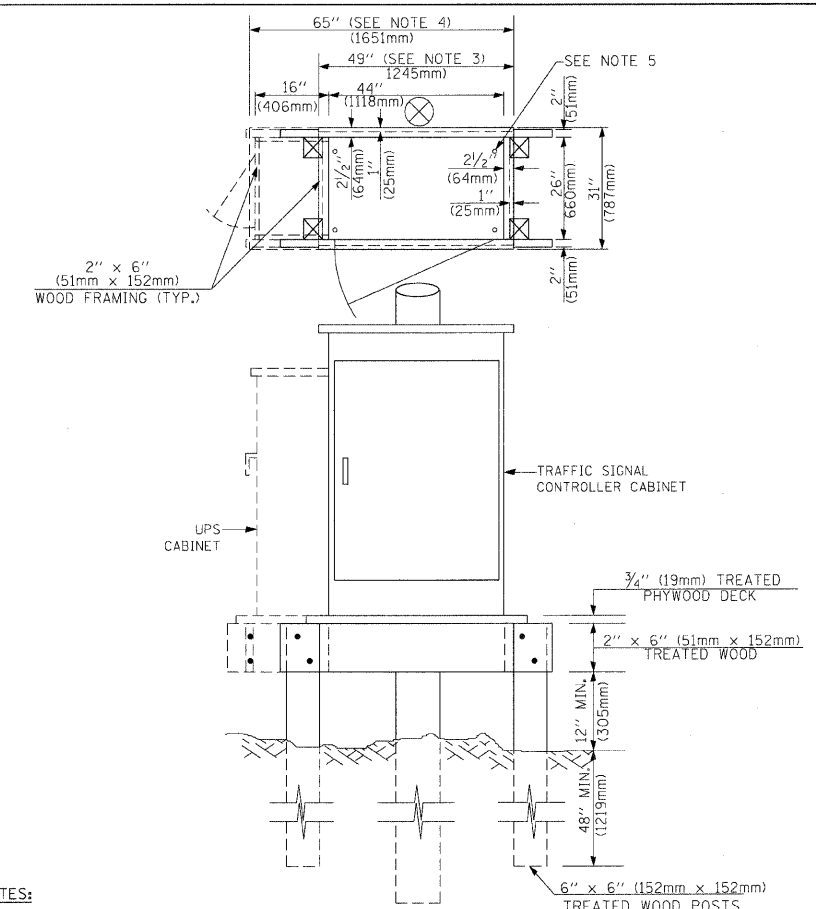
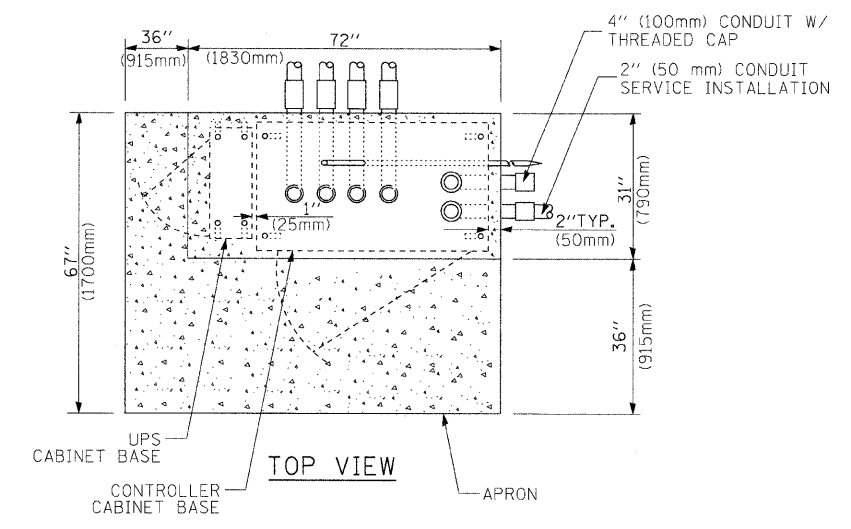
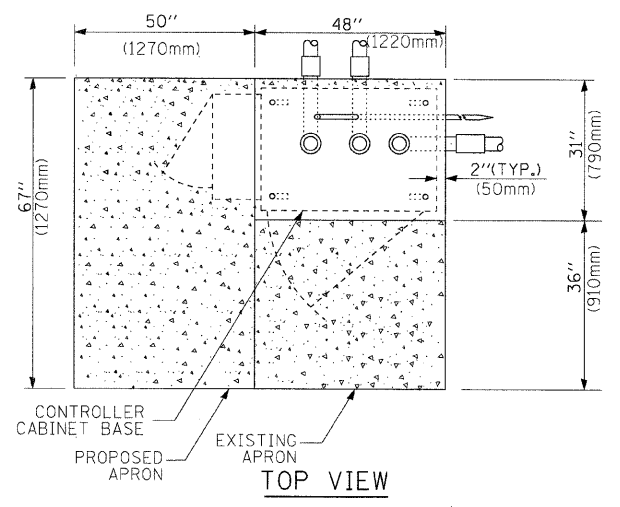


ITEM NO.	IDENTIFICATION
1	OUTLET BOX - GALV. 21 CU. IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\" (19 mm) CLOSE NIPPLE
7	3/4\" (19 mm) LOCKNUT
8	3/4\" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

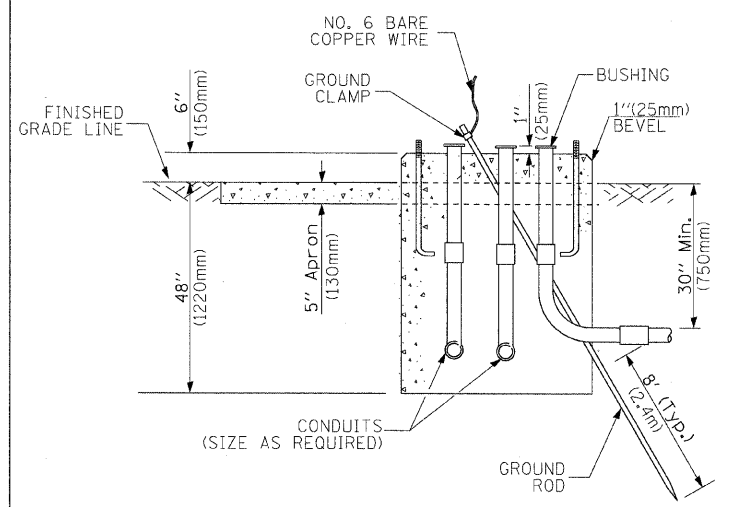
**NOTES:**

- 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-O-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.

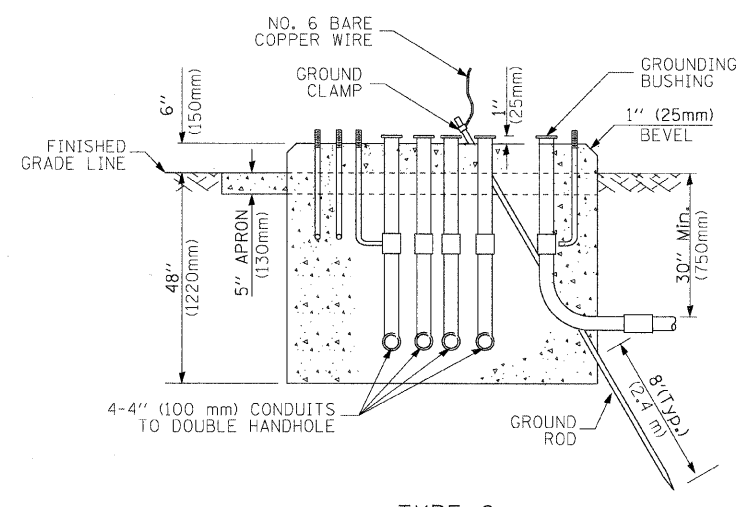
**EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL**



- NOTES:**
- 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.
  - 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.
  - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
  - PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
  - 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.
  - FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.



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



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

**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)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

- NOTES:**
- 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.
  - Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
  - Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
  - For mast arm assemblies with dual arms refer to state standard 878001.

**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**

FILE NAME =	USER NAME = kenthachixaybc	DESIGNED - DAG	REVISED -
ca\pawork\PWIDOT\KANTHAPHIXAYBC\d01126	4\tr\offic\legend.v7.dgn	DRAWN - BCK	REVISED -
	PLOT SCALE = 20,0000' / IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	09-00044-00-SW	COOK	29	25
CONTRACT NO. 63413				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

SCALE: SHEET NO. 5 OF 6 SHEETS STA. TO STA.

# 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			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH			CT	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)			CNC	CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			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	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			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				EXISTING INTERSECTION LOOP DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				EXISTING PREFORMED INTERSECTION LOOP DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID				PREFORMED SAMPLING (SYSTEM) DETECTOR			
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT							
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER							
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
MICROWAVE VEHICLE SENSOR											
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

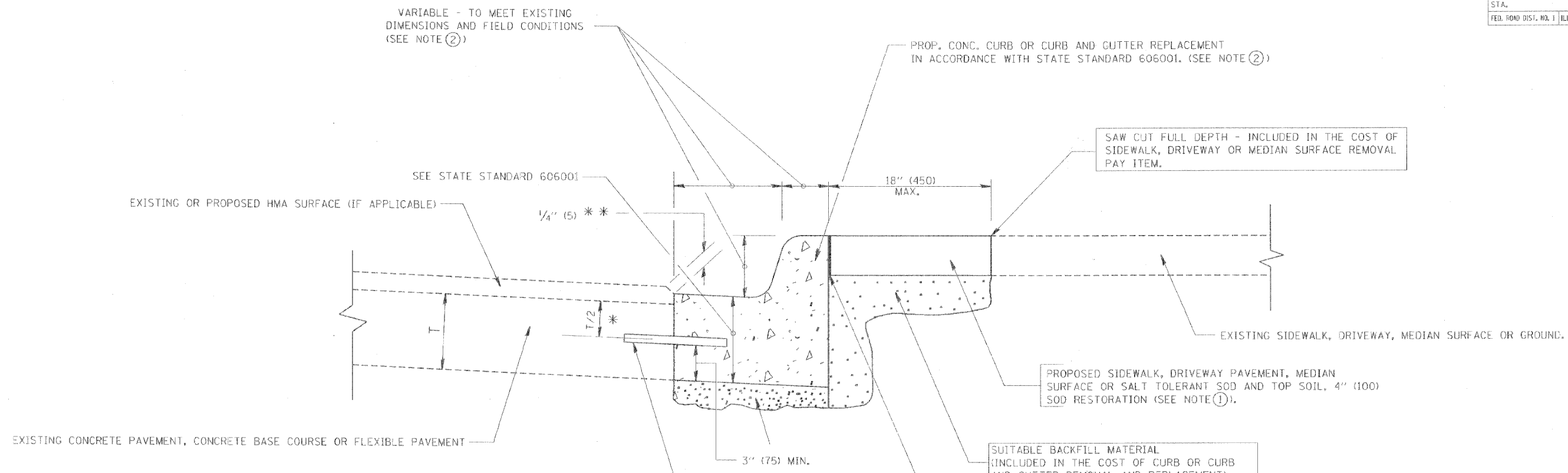
## RAILROAD SYMBOLS

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





F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	109-0044-00-SW	COOK	29	28
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



- \* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.
- \*\* IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: ① SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE PAID FOR SEPARATELY.

SALT TOLERANT SOD AND TOP SOIL, 4" (100) RESTORATION WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

- ② CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.
- ③ FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.
- ④ LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑤ THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.
- ⑥ THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.
- ⑦ THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

UNSUITABLE SUB-BASE MATERIAL TO BE REMOVED, IF DIRECTED BY THE ENGINEER, SHALL BE REPLACED WITH EITHER SUB-BASE GRANULAR MATERIAL, TYPE B OR ADDITIONAL THICKNESS OF CONCRETE.

REMOVAL AND REPLACEMENT 4" (100) OR LESS IS INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

REMOVAL AND REPLACEMENT IN EXCESS OF 4" (100) WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PROPOSED #6 (20) EPOXY COATED TIE BARS 24" (600) LONG AT 24" (600) CENTERS WILL NOT BE PAID FOR SEPARATELY. DELETE EPOXY COATED TIE BARS IF EXISTING TIE BARS ARE USUABLE AS DETERMINED BY THE ENGINEER. (SEE NOTE ③).

**BASIS OF PAYMENT:**  
THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER FOOT (METER) FOR "CURB REMOVAL AND REPLACEMENT" OR "COMBINATION CONCRETE CURB AND GUTTER REMOVAL AND REPLACEMENT".

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

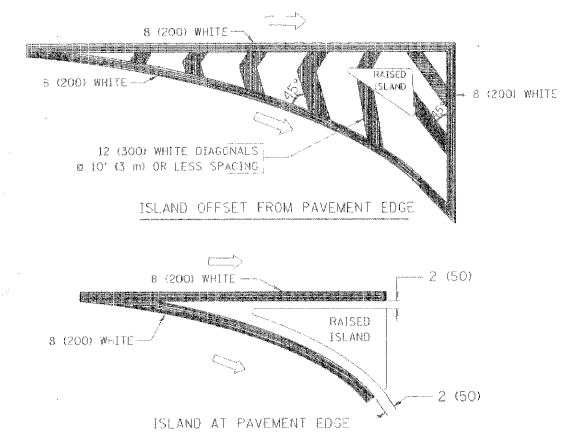
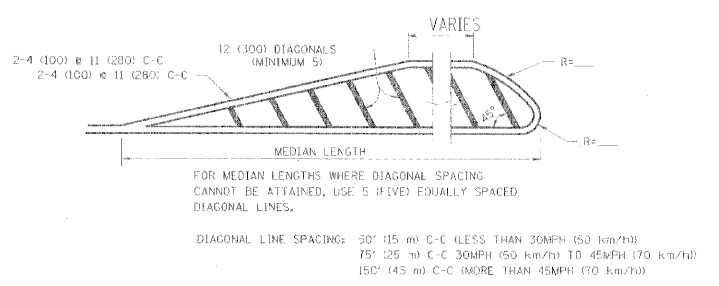
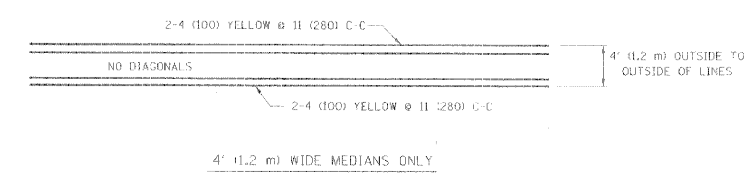
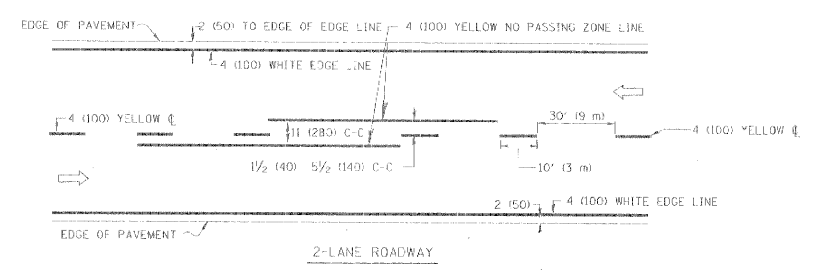
REVISIONS	
NAME	DATE
A. HOUSEH	03/11/94
R. SHAH	02/24/95
R. SHAH	03/02/95
R. SHAH	08/19/96
R. SHAH	09/12/96
R. SHAH	09/19/96
R. SHAH	10/03/96
A. ABBAS	03/21/97
M. GOMEZ	01/22/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT**

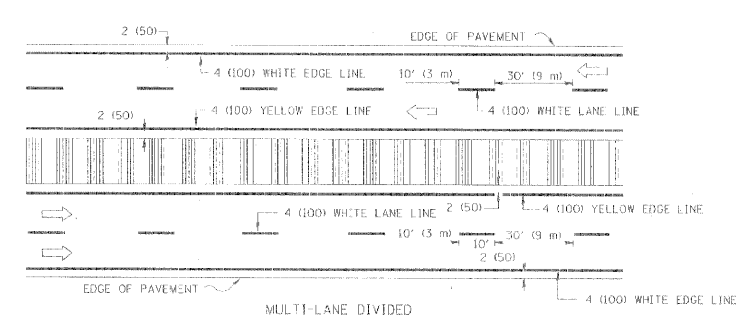
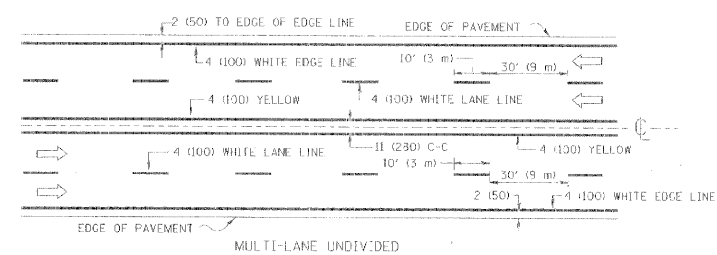
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HORIZ. \_\_\_\_\_  
DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
BD600-06 (BD-24)

# CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT

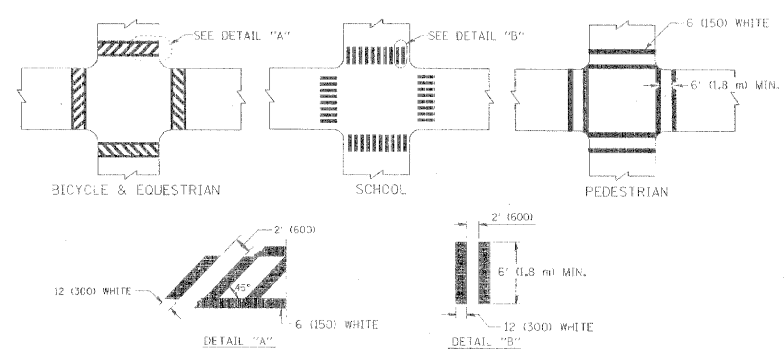
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USER = bborod



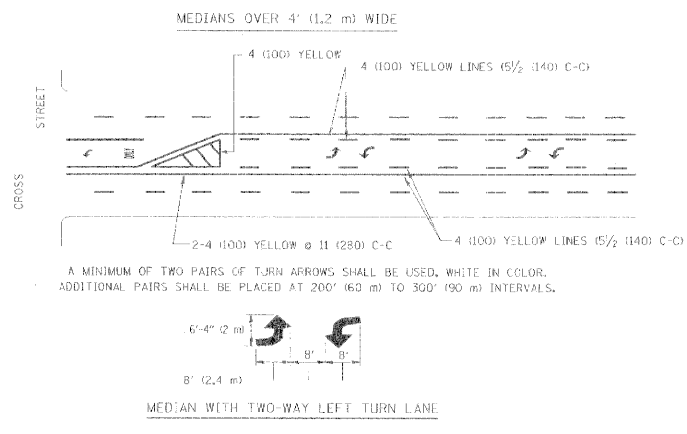
TYPICAL ISLAND MARKING



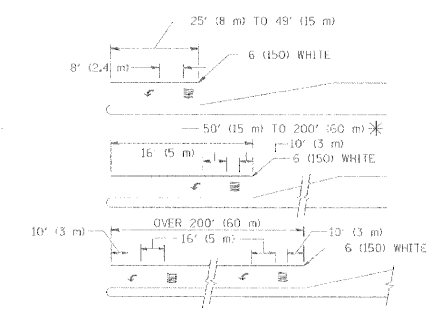
TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



TYPICAL PAINTED MEDIAN MARKING



TYPICAL TURN LANE MARKING

FULL SIZE LETTERS 8" (2.4 m) AND ARROWS SHALL BE USED.  
 AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)  
 \* 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".

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	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100)	SKIP-DASH	WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	5 (125) ON FREEWAYS	SKIP-DASH	WHITE	SAME AS LINE BEING EXTENDED
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	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN)	2 @ 6 (150)	SOLID	WHITE	NOT LESS THAN 6' (1.8 m) APART
A. DIAGONALS (BIKE & EQUESTRIAN)	12 (300) @ 45°	SOLID	WHITE	2' (600) APART
B. LONGITUDINAL BARS (SCHOOL)	12 (300) @ 90°	SOLID	WHITE	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	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE 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" 15 6" (1.3 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X"=54.0 SQ. FT. (5.0 m <sup>2</sup> )
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.

PLOT DATE = 9/9/2009  
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 PLOT SCALE = 1/8" = 1'-0"  
 USER NAME = drivekgrp

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACH	10-27-94
C. JUCCIUS	09-09-09

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE  
 TYPICAL PAVEMENT  
 MARKINGS

SCALE: NONE

DRAWN BY CADD  
 CHECKED BY  
 TC-13