

01-15-2016 LETTING ITEM 111

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

TRAFFIC DATA

2030 ADT = 3,000
POSTED SPEED LIMIT: 25 MPH
DESIGN SPEED LIMIT: 30 MPH

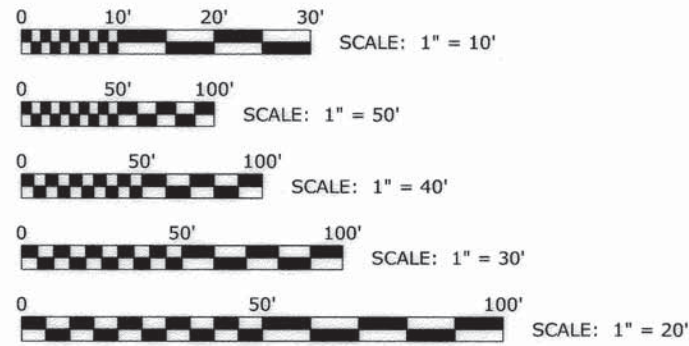
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
FAU ROUTE 1365 (SHIELDS AVENUE)
EBERLY AVENUE TO MAPLE AVENUE
RESURFACING AND RECONSTRUCTION
SECTION NO. 15-00128-00-RS
PROJECT M-4003 (500)
VILLAGE OF BROOKFIELD
COOK COUNTY
JOB NO. C-91-279-15**

LOCATION MAP

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 1365	15-00128-00-RS	COOK	35	1
ILLINOIS PROJECT M-4003 (500)				
VILLAGE SECTION				
CONTRACT NO. 61C14				



LOCATION OF SECTION INDICATED THUS: [arrow]



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.



**PROJECT ENDS
STATION 23+80
SHIELDS AVENUE**

**PROJECT BEGINS
STATION 0+85
SHIELDS AVENUE**

PROVISO TOWNSHIP
- AREA OF IMPROVEMENT
GROSS AND NET LENGTH OF PROJECT = 2,295 FT. = 0.435 MI.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED: C. CORBELL 9 20 15
VILLAGE OF BROOKFIELD, PRESIDENT

PASSED: 10-21 20 15
DISTRICT 1 ENGINEER OF LOCAL ROADS & STREETS

BASED ON LIMITED REVIEW: Dr. Tolson 26 20 15
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

(PRINTED BY AUTHORITY OF THE STATE OF ILLINOIS)



SIGNED: Derek S. Treichel
DATE: 10-09-2015 LICENSE EXPIRES: 11-30-15



CONTRACT NO. 61C14

E.H.E. NO. 125-15-02401

Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\01_Cover.dwg Oct 09, 2015 - 9:55am

FEDERAL AID PROGRAM ENGINEER: FAWAD AQJEEL, P.E.
SCHAUMBURG, ILLINOIS PHONE: (847)705-4021
CONSULTANT: EDWIN HANCOCK ENGINEERING COMPANY
9933 ROOSEVELT ROAD PHONE: (708)865-0300
WESTCHESTER, ILLINOIS 60154

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET, LOCATION MAP
2	INDEX OF SHEETS, LEGEND, HIGHWAY STANDARDS & BENCHMARKS
3	GENERAL NOTES
4-5	SUMMARY OF QUANTITIES
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9-10	MAINTENANCE OF TRAFFIC DETOUR FOR THROUGH TRAFFIC SIGNING, LEGEND OF SYMBOLS
11-15	PAVING PLAN AND PROFILE
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19-23	UTILITIES PLAN AND PROFILE
24-25	DRAINAGE AND UTILITIES DETAILS
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27	SIGNING LEGEND AND NOTES
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BENCHMARKS

BM NO.	DESCRIPTION	ELEVATION
1	NORTH-WEST FLANGE BOLT ON FIRE HYDRANT AT NORTH-WEST CORNER OF SHIELDS AVE. AND MAPLE AVE.	623.58
2	WEST NORTH-WEST FLANGE BOTTOM BONNET ON FIRE HYDRANT AT NORTH-WEST CORNER OF SHIELDS AVE. AND MADISON AVE.	624.85
3	NORTH NORTH-WEST FLANGE BOTTOM BONNET ON FIRE HYDRANT AT SOUTH-WEST CORNER OF SHIELDS AVE. AND RAYMOND AVE.	625.88
4	NORTH NORTH-WEST FLANGE BOTTOM BONNET ON FIRE HYDRANT AT NORTH-WEST CORNER OF SHIELDS AVE. AND DEYO AVE.	626.25
5	NORTH NORTH-WEST FLANGE BOTTOM BONNET ON FIRE HYDRANT AT NORTH-WEST CORNER OF SHIELDS AVE. AND BLANCHAN AVE.	625.56
6	NORTH NORTH-WEST FLANGE BOTTOM BONNET ON FIRE HYDRANT AT SOUTH-EAST CORNER OF SHIELDS AVE. AND EBERLY AVE.	627.29

LEGEND OF SYMBOLS

(TO BE USED IN CONJUNCTION WITH I.D.O.T. STANDARD 000001-06)

EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION
		MAILBOX TO BE RELOCATED			STORM SEWER PIPE
		POWER POLE			COMBINATION SEWER PIPE
		GAS VALVE			SANITARY SEWER PIPE
		STREET LIGHT POLE			COMCAST LINE
		WATER MAIN BUFFALO BOX			ELECTRIC LINE
		WATER MAIN VALVE BOX			GAS LINE
		SPRINKLER			TELEPHONE LINE
		WATER MAIN VALVE VAULT			WATER MAIN PIPE
		STORM SEWER MANHOLE			CURB AND GUTTER
		STORM CATCH BASIN			DIRECTION OF FLOW
		STORM INLET			DRAINAGE SUMMIT
		FIRE HYDRANT			WATER MAIN VALVE VAULT RIM AND TOP OF PIPE ELEVATION
		EXISTING STRUCTURE TO BE REMOVED			COMBINATION MANHOLE RIM AND INVERT ELEVATION
		EXISTING STRUCTURE TO BE FILLED			STORM SEWER MANHOLE/CATCHBASIN RIM AND INVERT ELEVATION
		TREE TO BE REMOVED			STRUCTURE TO BE ADJUSTED
		BUSH			TYPE 1 FRAME & CLOSED LID
		TREE			TYPE 1 FRAME & OPEN LID
		EXISTING CURB AND GUTTER TO BE REMOVED			RECONSTRUCT EXISTING STRUCTURE
		EARTH EXCAVATION			GROUND ELEVATIONS
		EXISTING CONCRETE SIDEWALK TO BE REMOVED			CATCH BASINS, TYPE A, 4' DIAMETER, TYPE I FRAME, OPEN LID, SPECIAL
		EXISTING CONCRETE DRIVEWAY TO BE REMOVED			CATCH BASINS, TYPE A, 4' DIAMETER, TYPE I FRAME, OPEN LID
		HOT-MIX ASPHALT SURFACE REMOVAL- BUTT JOINT			INLETS, TYPE A, TYPE I FRAME, OPEN LID
		COMBINATION SEWER PIPE TO BE REMOVED			MANHOLES, TYPE A, TYPE I FRAME, CLOSED LID
		STORM SEWER PIPE TO BE REMOVED			CATCH BASINS, TYPE C, TYPE 1 FRAME, OPEN LID
		SANITARY SEWER PIPE TO BE ABANDONED			
		STORM SEWER PIPE TO BE ABANDONED			
		WATER MAIN TO BE REMOVED			
		RAIL ROAD GATE			

I.D.O.T. STANDARD DRAWINGS

STANDARD NO.	TITLE OR DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
424001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424026-01	ENTRANCE/ALLEY PEDESTRIAN CROSSINGS
602601-03	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W MOVING OPERATIONS - DAY ONLY
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701801-05	SIDEWALK, CORNER OF CROSSWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
728001-01	TELESCOPING STEEL SIGN SUPPORT

INGS

PTION

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DESIGNED - JCG	REVISED -
DRAWN - MK, DMM	REVISED -
CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEETS, LEGEND OF SYMBOLS

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

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	2
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

ACCESS

THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN INGRESS AND EGRESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING THE CONSTRUCTION PERIOD. DURING CONSTRUCTION, GARBAGE TRUCKS MUST BE PERMITTED ACCESS TO THE WORK ZONE IN ORDER TO PICK UP COMMERCIAL GARBAGE FOR THOSE PROPERTIES IMPACTED BY CONSTRUCTION. IF GARBAGE TRUCK ACCESS IS NOT PROVIDED, THE CONTRACTOR WILL BE REQUIRED TO MOVE TRASH CONTAINERS TO AN ACCESSIBLE LOCATION WHICH WILL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES AS SHOWN ON THE PLANS HAVE BEEN OBTAINED BY FIELD SURVEYS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THE DATA IS ESSENTIALLY CORRECT, BUT THE VILLAGE OF BROOKFIELD, THE ILLINOIS DEPARTMENT OF TRANSPORTATION AND/OR OTHER OFFICES AND AGENCIES ASSOCIATED WITH THE DEVELOPMENT OF THESE PLANS DO NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. THE CONTRACTOR WILL BE REQUIRED TO VERIFY THE LOCATION OF EACH FACILITY WITH THE UTILITY COMPANY, AND SHALL TAKE DUE CARE IN ALL PHASES OF THE CONSTRUCTION TO PROTECT ANY SUCH FACILITIES WHICH MAY BE AFFECTED BY THE WORK. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED IN ACCORDANCE WITH ARTICLE LR 105.

ADJUSTMENTS REQUIRED BY UTILITY COMPANIES WILL BE PERFORMED BY THE COMPANY INVOLVED OR ITS CONTRACTOR, BUT WILL BE COORDINATED BY GENERAL CONTRACTOR.

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

THE CONTRACTOR SHALL USE EXTREME CAUTION IN THE REMOVAL OF ABANDONED EXISTING GAS LINES SINCE RESIDUAL MATERIALS CONTAINED THEREIN ARE HIGHLY EXPLOSIVE, FLAMMABLE, AND TOXIC. ONCE THE MAINS ARE ABANDONED BY THE OWNER, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY DAMAGE AND/OR INJURY OCCURRING ON THE PROJECT DUE TO HIS OPERATIONS NEXT TO THE MAINS AND/OR THE METHOD OF REMOVAL OF THE ABANDONED MAINS.

STORM SEWER

THE VERTICAL AND HORIZONTAL CLEARANCES BETWEEN WATER MAINS AND PROPOSED OR EXISTING STORM SEWERS SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 41-1.02A THROUGH 41-1.02D OF THE "STANDARD SPECIFICATIONS FOR WATER & SEWER MAIN CONSTRUCTION IN ILLINOIS".

FRAMES AND GRATES

THE TYPE OF FRAMES AND GRATES REQUIRED FOR ALL CATCH BASINS AND MANHOLES LISTED IN THE SUMMARY OF QUANTITIES MAY BE FOUND ON THE PLANS AT THEIR RESPECTIVE LOCATIONS. WHERE LIDS ARE CALLED FOR ON THE PLANS, THEY SHALL BE IN ACCORDANCE WITH ARTICLE 604.01 OF THE STANDARD SPECIFICATIONS AND THE TERM LID IS USED IN LIEU OF GRATE.

FORMS FOR CONCRETE SIDEWALKS, DRIVEWAYS, PAVEMENT, AND GUTTER FLAGS

A 2" X 6" BOARD WILL BE USED AS A FORM FOR ALL SIDEWALKS TO BE INSTALLED FIVE INCHES (5") IN THICKNESS. A 2" X 8" BOARD WILL BE USED AS A FORM FOR ALL DRIVEWAYS TO BE INSTALLED SEVEN INCHES (7") IN THICKNESS. A 2" X 10" BOARD WILL BE USED AS THE FORM FOR ALL DRIVEWAYS TO BE INSTALLED EIGHT INCHES (8") IN THICKNESS. A 2" X 12" BOARD WILL BE USED AS THE FORM FOR THE FACE OF THE GUTTER FLAGS TO BE INSTALLED TEN INCHES (10") IN THICKNESS. ALL FORMS MUST BE OF A MINIMUM HEIGHT OF THE PROPOSED THICKNESS OF THE RESPECTIVE CONCRETE ITEMS TO BE INSTALLED.

OPEN EXCAVATION

THE CONTRACTOR WILL NOT BE ALLOWED TO LEAVE EXCAVATIONS OPEN OVERNIGHT. THE CONTRACTOR WILL BE RESPONSIBLE FOR COMPLETELY BACKFILLING OR PLATING OVER OF ALL EXCAVATIONS AT THE END OF EACH DAY. IF THE EXCAVATIONS ARE BACKFILLED THEY SHALL BE FILLED WITH AN AGGREGATE MEETING THE GRADATION OF CA-6. THE MATERIAL WILL BE COMPACTED SUFFICIENTLY TO PREVENT RUTTING OR SETTLEMENT OF MATERIAL UNDER TRAFFIC LOADS. IF PLATES ARE USED THEY SHALL BE OF SUFFICIENT THICKNESS TO SUPPORT VEHICULAR LOADS. ADDITIONALLY THEY SHALL EXTEND A MINIMUM OF NINE INCHES (9") BEYOND THE LIMITS OF THE EXCAVATION ON ALL SIDES. IF THE PLATES ARE TO BE LEFT OVER THE WEEKEND, THE EDGES OF THE PLATES SHALL BE CUSHIONED WITH A BITUMINOUS MIXTURE IN AREAS WHERE VEHICULAR TRAFFIC WILL CROSS THE PLATES.

THE COSTS FOR PROVIDING THE AGGREGATE, PLATES AND BITUMINOUS MIXTURE WILL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE VARIOUS PAVING ITEMS.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES FLOWS THROUGH EXISTING STORM AND SANITARY SEWER SYSTEMS. HE SHALL ALSO PROVIDE AND MAINTAIN AN EFFICIENT PUMPING PLANT IF NECESSARY AND A TEMPORARY OUTLET AND BE PREPARED AT ALL TIMES TO DISPOSE OF THE WATER COLLECTED IN A SAFE MANNER WITHOUT DAMAGE OF ANY KIND TO ADJACENT PROPERTIES. THE ENDS OF EXISTING DRAINAGE LINES WHICH ARE NOT TO BE INCORPORATED INTO THE PROJECT ARE TO BE SEALED AS SPECIFIED IN THE SPECIAL PROVISIONS. THE COST OF ALL THE PREVIOUSLY MENTIONED WORK SHALL BE INCLUDED IN THE RESPECTIVE SEWER PAY ITEMS. ALL ACCUMULATION OF MATERIAL IN THE STRUCTURE DUE TO CONSTRUCTION OPERATIONS AS WELL AS MATERIAL EXISTING BEFORE CONSTRUCTION, SHALL BE REMOVED BY THE CONTRACTOR AT HIS EXPENSE.

EXISTING STRUCTURE MODIFICATIONS

ALL KNOWN EXISTING STRUCTURES IN THE PAVEMENT OR ADJACENT AREAS WHICH ARE INVOLVED IN THE CONSTRUCTION HAVE BEEN SHOWN ON THE PLANS AND NOTED AS TO BE REMOVED, FILLED, RECONSTRUCTED, OR ADJUSTED BY THE CONTRACTOR EXCEPT THOSE OF AMERITECH, COMED, AND THE NICOR GAS COMPANY, WHICH ARE TO BE ADJUSTED BY THE APPROPRIATE UTILITY FORCE. WHERE EXISTING STRUCTURES ARE TO BE REMOVED OR FILLED, OR THE EXISTING CASTING REPLACED, THE CASTINGS REMOVED FROM THE STRUCTURE ARE TO REMAIN THE PROPERTY OF THE VILLAGE AND BE SALVAGED. THE CONTRACTOR IS TO DELIVER FRAMES AND LIDS TO THE VILLAGE'S PUBLIC WORKS YARD AT 4545 EBERLY AVENUE, BROOKFIELD, IL.

SHEETING OR SHORING

ANY SHEETING OR SHORING REQUIRED FOR THE STORM SEWER INSTALLATION OR OTHER CONSTRUCTION ELEMENTS REQUIRING RELATIVELY DEEP EXCAVATIONS, SHALL BE INCLUDED IN THE PARTICULAR PAYMENT ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY SUPPLEMENTAL WORK ASSOCIATED WITH THE MAINTENANCE OF TRENCH SIDES OR OTHER EXCAVATED AREAS.

MAINTENANCE OF EXISTING DRAINAGE STRUCTURES

ANY LOOSE MATERIAL THAT IS DEPOSITED IN THE FLOW LINE OF GUTTERS OR DRAINAGE STRUCTURE THAT INHIBITS THE NATURAL FLOW OF WATER SHALL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS, ALL DRAINAGE FACILITIES SHALL BE CLEAN AND FREE OF ALL OBSTRUCTIONS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE RESPECTIVE SEWER PAY ITEMS.

SAW CUTTING

THE CONTRACTOR SHALL SAW CUT ASPHALT PAVEMENT AND CONCRETE PAVEMENT AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, TO SEPARATE THE EXISTING PAVEMENT TO BE REMOVED BY MEANS OF AN APPROVED CONCRETE SAW TO A DEPTH AS DIRECTED BY THE ENGINEER. SUITABLE GUIDELINES OR DEVICES SHALL BE USED TO ASSURE CUTTING A NEAT, STRAIGHT LINE AS SHOWN ON THE PLANS. CARE SHALL BE TAKEN BY THE CONTRACTOR SO AS NOT TO DAMAGE THE REMAINING PAVEMENT DIRECTLY ADJACENT TO THE PAVEMENT TO BE REMOVED. ANY DAMAGE TO THE EXISTING PAVEMENT RESULTING FROM PAVEMENT REMOVAL OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE PRICE OF SAW CUTTING, AS NOTED ABOVE, SHALL BE INCLUDED IN THE PARTICULAR PAY ITEMS. THE ONLY SAW-CUTTING THAT WILL BE PAID FOR SEPARATELY IS THE SAW-CUT NEEDED LONGITUDINALLY ALONG CORNELL AVENUE AS DESCRIBED IN SPECIAL PROVISIONS.

PROPOSED STRUCTURES

THE CONTRACTOR SHALL NOT ORDER PROPOSED STRUCTURES UNTIL A JULIE REQUEST HAS BEEN EXECUTED AND THE ENGINEER HAS BEEN NOTIFIED BY THE CONTRACTOR WHETHER ANY CONFLICTS EXISTS.

ITEMS TO BE SALVAGED

WHERE SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER, EXISTING SEWER FRAMES AND LIDS, VALVE BOXES, DOMESTIC WATER SERVICE BOXES, FIRE HYDRANTS AND OTHER CASTINGS ARE TO BE REMOVED BY THE CONTRACTOR. ADDITIONALLY, ALL EXISTING SIGNAGE SCHEDULED FOR REMOVAL WILL ALSO BE APPROPRIATED BY THE CONTRACTOR. THESE ITEMS WILL REMAIN THE PROPERTY OF THE VILLAGE, AND SHALL BE DELIVERED TO THE OWNER AT ITS PUBLIC WORKS FACILITY AT 4545 EBERLY AVENUE, BROOKFIELD, IL.

NOTIFICATION OF RESIDENTS

THE CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING WRITTEN NOTICE TO ALL RESIDENCES AND/OR PLACES OF BUSINESS IN THE WORK ZONE AT LEAST ONE (1) WORKING DAY PRIOR TO PERFORMING ANY CONSTRUCTION ACTIVITY THAT WILL IMPACT ACCESS TO THEIR PROPERTY. THE WRITTEN NOTICE SHALL BE APPROVED BY THE ENGINEER AND COORDINATED WITH THE VILLAGE PRIOR TO THE BEGINNING OF CONSTRUCTION.

NOTE

THE CONTRACTOR SHALL NOTIFY THE IDOT TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

TRAFFIC PROTECTION

WHEN WORK COMMENCES, THE CONTRACTOR SHALL ASSUME THE MAINTENANCE OF ALL PAVEMENT, SHOULDERS, DRAINAGE FACILITIES, TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, AND OTHER APPURTENANCES ON ROADWAYS WITHIN THE LIMITS OF THE CONTRACT WHICH ARE TO BE USED BY THE PUBLIC DURING CONSTRUCTION AND TO RETAIN THIS MAINTENANCE RESPONSIBILITY UNTIL PROJECT COMPLETION. NEED FOR SNOW AND ICE CONTROL DURING THE CONSTRUCTION PERIOD SHALL BE ACCOMMODATED FOR BY OTHERS. ALL UNBALLASTED TYPE I & TYPE II BARRICADES SHALL HAVE TWO SANDBAGS ONE ACROSS EACH BOTTOM RAIL.

PLUGGING EXISTING SEWERS AND DRAINS

UNLESS OTHERWISE SPECIFIED, ABANDONED SEWERS AND DRAINS, AS DESIGNATED BY THE ENGINEER, SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FOOT LONG NON-SHRINK/MORTAR PLUG. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE PAY ITEMS FOR REMOVING AND/OR FILLING THE VARIOUS TYPES OF STRUCTURES.

STORM SEWER STRUCTURES

PRE-CAST REINFORCED CONCRETE SECTIONS FABRICATED IN ACCORDANCE WITH ASTM C-478 WILL BE USED ON ALL STRUCTURES AND RECONSTRUCTED STRUCTURES. FINAL ADJUSTMENT SHALL BE MADE USING PRE-CAST ADJUSTING RINGS. A MAXIMUM OF 6" OF ADJUSTING RINGS WILL BE PERMITTED. THE WORK DESCRIBED WITHIN THE SPECIAL PROVISION FOR FRAMES AND LIDS TO BE ADJUSTED (SPECIAL) SHALL BE PERFORMED WHEN INSTALLING A NEW STORM SEWER STRUCTURE. THIS ITEM WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE UNIT PRICE FOR THE VARIOUS PROPOSED STORM SEWER STRUCTURES IN THE CONTRACT.

MANHOLE OR VALVE VAULT COVERS

THE WORD "WATER", "SANITARY", OR "STORM" SHALL BE CAST INTO THE LID OF EACH RESPECTIVE MANHOLE OR VALVE VAULT.

BACKFILLING SEWERS UNDER ROADWAY

FOR SEWERS UNDER THE ROADWAY, BACKFILLING METHODS TWO AND THREE (JETTING) AS DESCRIBED IN ARTICLE 550.07 WILL NOT BE ALLOWED.

CONCRETE BREAKERS

WHEN REMOVING PAVEMENT, CURB AND GUTTER, SHOULDER, AND/OR ANY OTHER STRUCTURES, THE USE OF ANY TYPE OF CONCRETE BREAKERS SUCH AS DROP HAMMERS, WHICH MIGHT DAMAGE UNDERGROUND PUBLIC OR PRIVATE UTILITIES, WILL NOT BE PERMITTED. UNDER NO CIRCUMSTANCES WILL THE USE OF A FROST BALL BE PERMITTED.

PAVING OPERATIONS

THE PLACEMENT OF ALL HOT-MIX ASPHALT LAYERS SHALL BE PLACED IN NO MORE THAN TWO (2) PASSES OF THE PAVING EQUIPMENT. THE CENTERLINE JOINTS OF EACH HOT-MIX ASPHALT LAYER SHALL BE OFFSET FROM THE PREVIOUS LAYER, BY A MINIMUM OF THREE INCHES (3"). THE CONTRACTOR WILL BE REQUIRED TO SCHEDULE THEIR OPERATIONS SO THAT NO SECTIONS OF PAVEMENT ALONG THE CENTERLINE WILL HAVE A COLD JOINT OVERNIGHT. ALL INTERSECTION RETURNS SHALL BE PAVED AT THE SAME TIME AS THE MAINLINE PAVEMENT.



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DRAWN -	MK, DMM	REVISED -
CHECKED -	DST	REVISED -
DATE -	10-12-15	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	3
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\04-05_500.dwg Oct 15, 2015 - 3:48pm

SUMMARY OF QUANTITIES					
	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE RESURF 0005 75% FEDERAL 25% LOCAL
~	20101100	TREE TRUNK PROTECTION	EACH	47	47
~ *	20101200	TREE ROOT PRUNING	EACH	47	47
~	20200100	EARTH EXCAVATION	CU YD	900	900
	20200200	ROCK EXCAVATION	CU YD	50	50
	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	1,200	1,200
	20700220	POROUS GRANULAR EMBANKMENT	CU YD	1,200	1,200
~	20800150	TRENCH BACKFILL	CU YD	350	350
~	21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	3,700	3,700
~	21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	3,900	3,900
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	50	50
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	50	50
	25000600	POTASSIUM PERTILIZER NUTRIENT	POUND	50	50
	25200100	SODDING	SQ YD	3,900	3,900
	25200200	SUPPLEMENTAL WATERING	UNIT	60	60
~	28000510	INLET FILTERS	EACH	26	26
~	35101800	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	3,700	3,700
~	35300300	PORTLAND CEMENT CONCRETE BASE COURSE, 8"	SQ YD	4,200	4,200
	40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	150	150
~	40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	5,100	5,100
	40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	5	5
	40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	525	525
	40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	1,000	1,000
~	40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	5	5
~	42000300	PORTLAND CEMENT CONCRETE PAVEMENT 8"	SQ YD	60	60
~	42101300	PROTECTIVE COAT	SQ YD	2,900	2,900
~	42300300	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 7 INCH	SQ YD	400	400
~	42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	325	325
~	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	7,200	7,200
~	42400800	DETECTABLE WARNINGS	SQ FT	820	820
~	44000100	PAVEMENT REMOVAL	SQ YD	3,950	3,950
~	44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	700	700
~	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	5,750	5,750
~	44000600	SIDEWALK REMOVAL	SQ FT	7,250	7,250
~	44213204	TIE BARS 3/4"	EACH	1,050	1,050
~ *	56109300	WATER VALVES TO BE MOVED	EACH	2	2
~ *	56400800	FIRE HYDRANT AND VALVE TO BE MOVED	EACH	1	1

* DENOTES SPECIALTY ITEM

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DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE: NONE	SHEET NO. 1 OF 2 SHEETS	STA. TO STA.
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MS RTE. 1365	SECTION 15-00128-00-RS	COUNTY COOK	TOTAL SHEETS 35	SHEET NO. 4
FIELD BOOK NO.: 1589		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\04-05_S00.dwg Oct 15, 2018 - 3:48pm

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE RESURF 0005 75% FEDERAL 25% LOCAL
~	60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	5	5
~	60406100	FRAMES AND LIDS, TYPE 1, CLOSED LID	EACH	1	1
~	60600605	CONCRETE CURB, TYPE B	FOOT	60	60
~	60604100	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED)	FOOT	5,700	5,700
	67100100	MOBILIZATION	L SUM	1	1
	70106800	CHANGEABLE MESSAGE SIGN	CAL MD	1	1
	72000100	SIGN PANEL - TYPE 1	SQ FT	170	170
	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	351	351
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	200	200
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1,000	1,000
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	300	300
~	K1003679	MULCH	CU YD	60	60
~	X0323389	STORM SEWER CONNECTION	EACH	1	1
~*	X0325207	TELEVISION INSPECTION OF SEWER	FOOT	3,000	3,000
~	X4400100	PORTLAND CEMENT CONCRETE SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	4,200	4,200
~	X4400196	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	SQ YD	325	325
~	X6022402	MANHOLES, TYPE A, 4' DIAMETER, TYPE 1 FRAME, CLOSED LID, SPECIAL	EACH	4	4
~	X6022805	CATCH BASINS, TYPE A, 4' DIAMETER, TYPE 1 FRAME, OPEN LID, SPECIAL	EACH	24	24
~	X6023102	MANHOLES, TYPE A, 5' DIAMETER, TYPE 1 FRAME, CLOSED LID, SPECIAL	EACH	5	5
~	X6023202	INLETS, WITH TYPE 1 FRAME, OPEN LID, SPECIAL	EACH	1	1
~	X7010216	TRAFFIC CONTROL PROTECTION (SPECIAL)	L SUM	1	1
~	Z0004542	HOT-MIX ASPHALT REMOVAL (SPECIAL)	SQ YD	25	25
~	Z0018700	DRAINAGE STRUCTURE TO BE REMOVED	EACH	26	26
~	Z0018911	DRILL AND GROUT #6 TIE BARS	EACH	1,600	1,600
~	Z0019600	DUST CONTROL WATERING	UNIT	50	50
~	Z0056644	STORM SEWER TYPE 1, WATER MAIN QUALITY PIPE, 8"	FOOT	345	345
~	XX004210	DUCTILE IRON PIPE STORM SEWER, 12"	FOOT	170	170
~	XX000541	EXPLORATORY EXCAVATION	CU YD	10	10
~	XX006448	PVC COMBINED SEWER REPLACEMENT, 10"	FOOT	14	14
~	XX006450	PVC COMBINED SEWER REPLACEMENT, 15"	FOOT	66	66
~	XX006986	STORM SEWER, DUCTILE IRON PIPE, TYPE 1, 8"	FOOT	225	225
~	XX006994	8" X 4" CATCH BASIN TRAP AND RESTRICTOR	EACH	24	24
~	XX008533	STORM SEWER, DUCTILE IRON, 16"	FOOT	30	30

~ DENOTES THAT A SPECIAL PROVISION HAS BEEN PROVIDED



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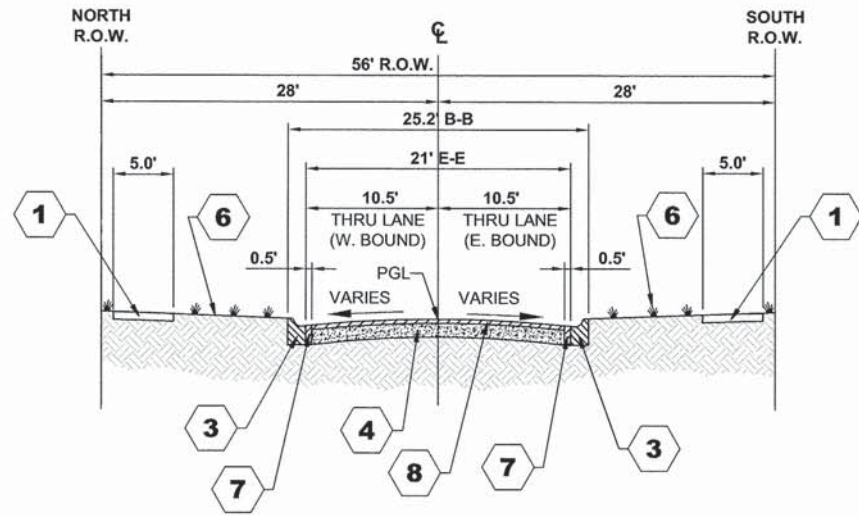
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CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

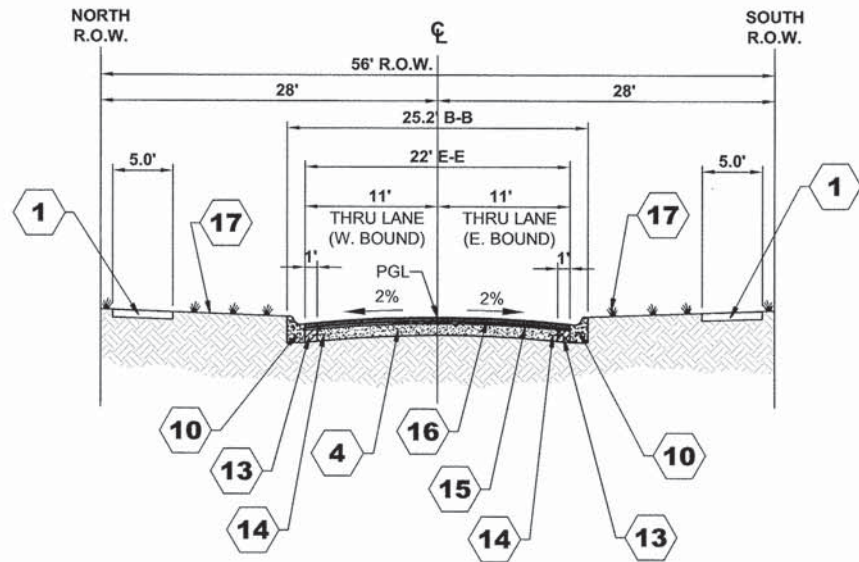
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SUMMARY OF QUANTITIES

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	5
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		
E.H.E. PROJECT NO. 125-15-02401				



EXISTING TYPICAL SECTION
SHIELDS AVENUE
 (STA. 1+00 TO STA. 3+65)
 (STA. 4+32 TO STA. 6+94)
 (STA. 7+70 TO STA. 10+32)
 (STA. 11+04 TO STA. 13+57)



PROPOSED TYPICAL SECTION
SHIELDS AVENUE
 (STA. 1+00 TO STA. 3+65)
 (STA. 4+32 TO STA. 6+94)
 (STA. 7+70 TO STA. 10+32)
 (STA. 11+04 TO STA. 13+57)

HOT-MIX ASPHALT (HMA) MIXTURE REQUIREMENTS

ITEM	AIR VOIDS
RESURFACING	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (IL 9.5 mm), 2"	4% @ 50 GYR
LEVELING BINDER (MACHINE METHOD), N50, 1" & VARIES	4% @ 50 GYR
INCIDENTAL HOT-MIX ASPHALT SURFACING - HMA PARKWAYS	
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50 (2 LIFTS) (IL 9.5 mm), 3"	4% @ 50 GYR

THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES = 112 LBS/SQYD/IN.

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

FOR HMA FULL DEPTH "AC TYPE" SEE SPECIAL PROVISIONS.

FOR USE OF RECYCLED MATERIALS SEE SPECIAL PROVISIONS.

TYPICAL CROSS SECTION LEGEND

EXISTING

PROPOSED

- 1 PORTLAND CEMENT CONCRETE SIDEWALK
- 2 COMBINATION CURB AND GUTTER REMOVAL (TYPE B-6.12)
- 3 COMBINATION CURB AND GUTTER REMOVAL (TYPE B-6.18)
- 4 PORTLAND CEMENT CONCRETE BASE COURSE, 5" - 7"
- 5 HOT-MIX ASPHALT BINDER & SURFACE COURSE, 2" - 4"
- 6 GRASS PARKWAY
- 7 PAVEMENT REMOVAL
- 8 CONCRETE SURFACE REMOVAL, VARIABLE DEPTH
- 9 EARTH EXCAVATION
- 10 COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (MODIFIED)
- 11 GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
- 12 AGGREGATE BASE COURSE, TYPE B 6"
- 13 PORTLAND CEMENT CONCRETE BASE COURSE, 8"
- 14 DRILL AND GROUT #6 TIE BARS (EPOXY COATED, 3/4" DIA., 12" LONG DEFORMED TIE BARS @ 24" O.C.)
- 15 LEVELING BINDER (MACHINE METHOD), N50, 1"
- 16 HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50, 2"
- 17 TOPSOIL FURNISH AND PLACE, 4" SODDING

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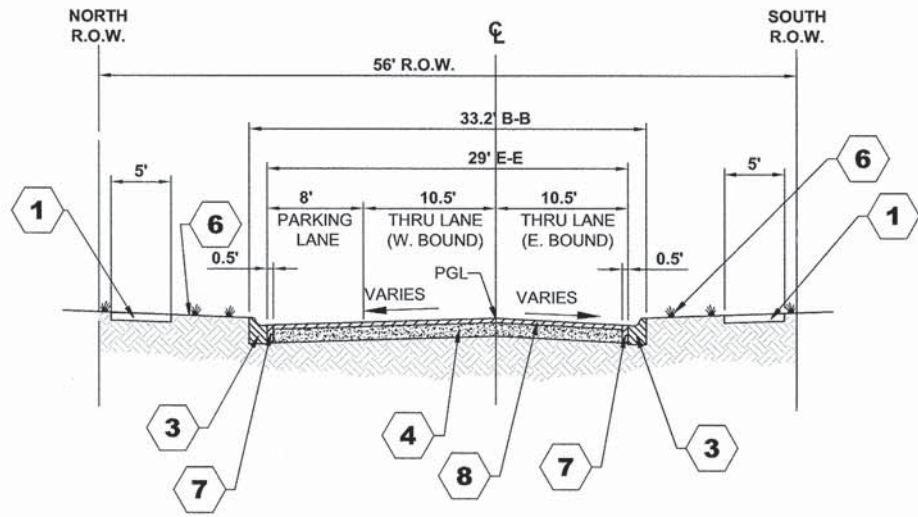
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DATE - 10-12-15	REVISED -

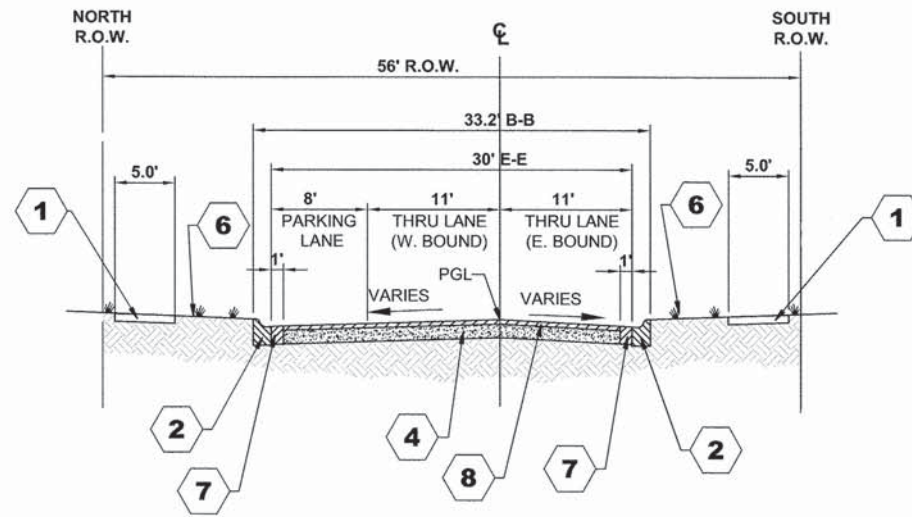
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DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS	
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STA.	TO STA.

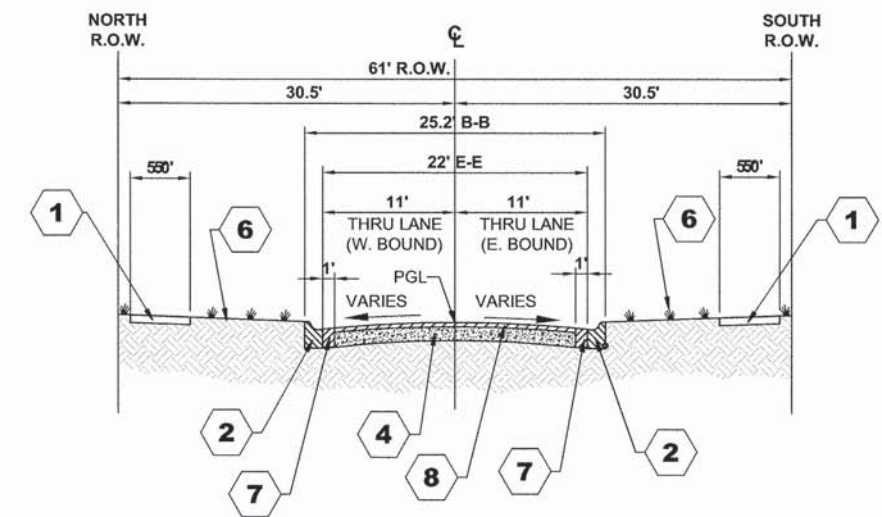
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1365	15-00128-00-RS	COOK	35	6
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		



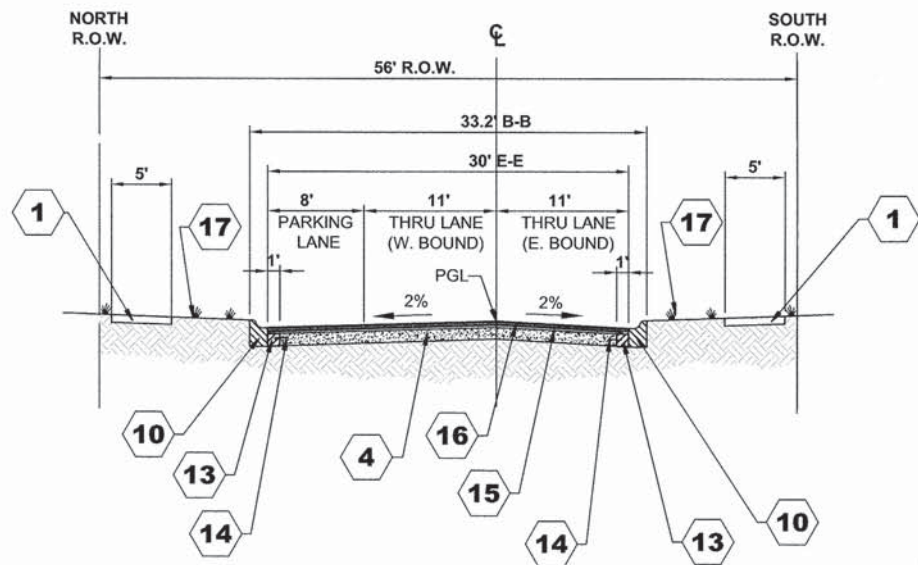
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SHIELDS AVENUE
(STA. 14+47 TO STA. 15+69)



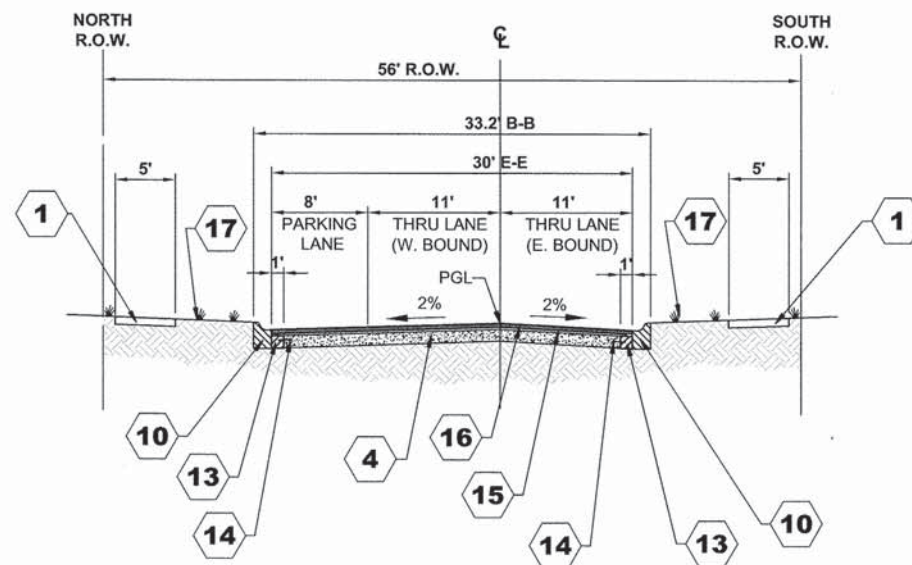
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SHIELDS AVENUE
(STA. 15+69 TO STA. 16+86)



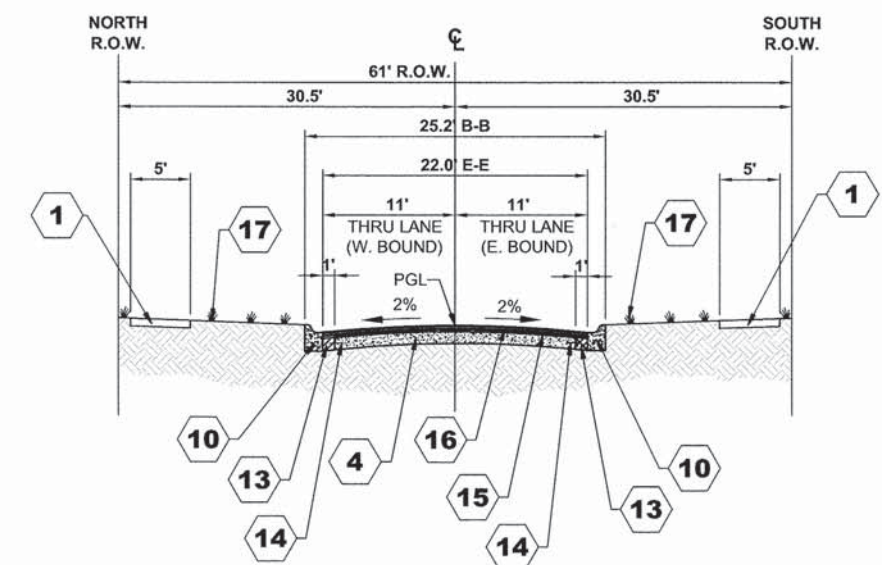
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SHIELDS AVENUE
(STA. 17+98 TO STA. 19+76)
(STA. 21+20 TO STA. 23+35)



PROPOSED TYPICAL SECTION
SHIELDS AVENUE
(STA. 14+47 TO STA. 15+69)



PROPOSED TYPICAL SECTION
SHIELDS AVENUE
(STA. 15+69 TO STA. 16+86)



PROPOSED TYPICAL SECTION
SHIELDS AVENUE
(STA. 17+98 TO STA. 19+76)
(STA. 21+20 TO STA. 23+35)

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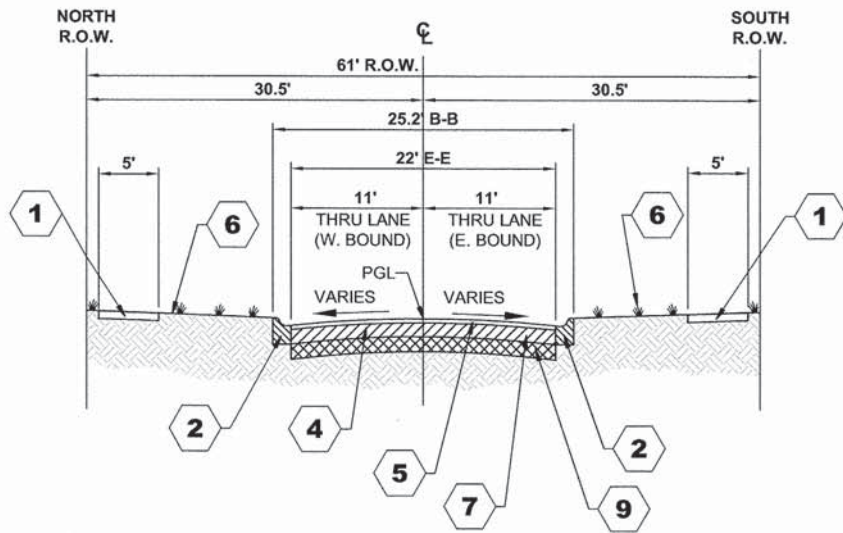
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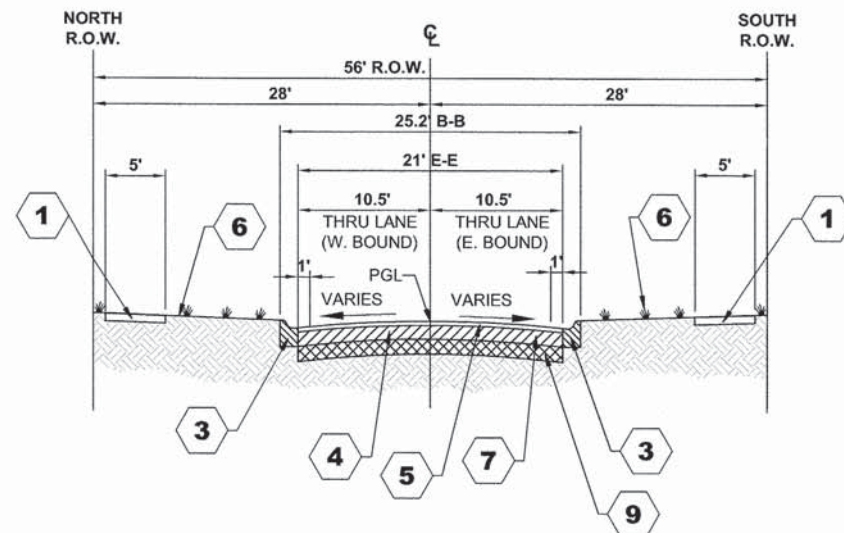
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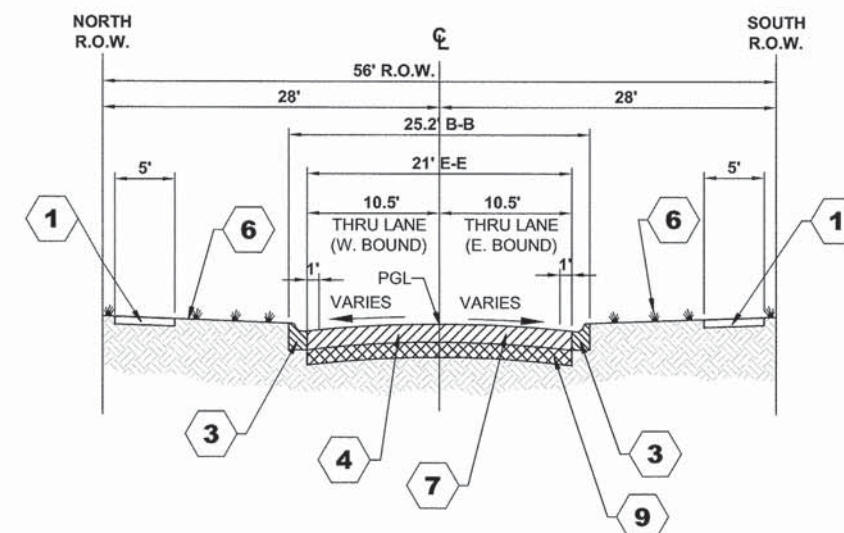
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1365	15-00128-00-RS	COOK	35	7
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		
E.H.E. PROJECT NO. 125-15-02401				



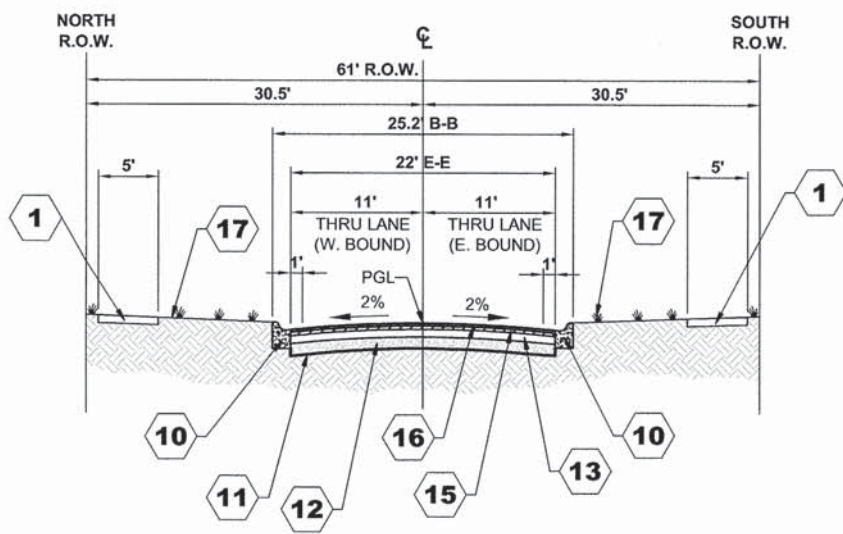
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SHIELDS AVENUE (THROUGH INTERSECTIONS)
MADISON AVE. (STA. 16+86 TO STA. 17+98)
ARTHUR AVE. (STA. 19+76 TO STA. 21+20)



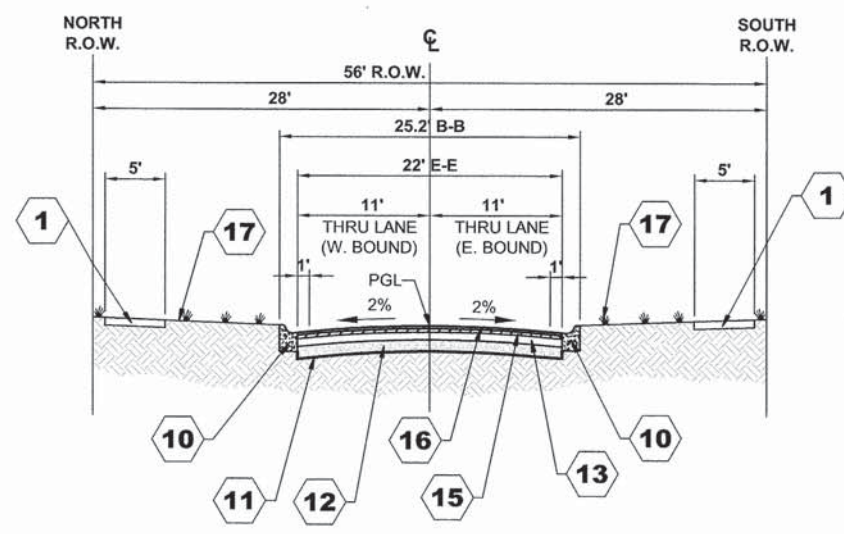
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SHIELDS AVENUE (THROUGH INTERSECTIONS)
RAYMOND AVENUE (STA. 13+57 TO STA. 14+47)



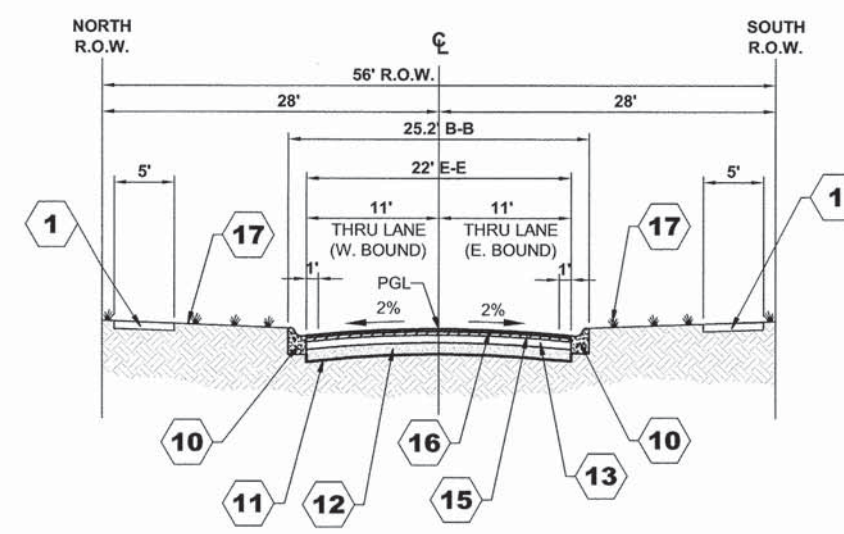
EXISTING TYPICAL SECTION
SHIELDS AVENUE (THROUGH INTERSECTIONS)
BLANCHAN AVENUE (STA. 3+65 TO STA. 4+32)
DUBOIS AVENUE (STA. 6+94 TO STA. 7+70)
DEYO AVENUE (STA. 10+32 TO STA. 11+04)



PROPOSED TYPICAL SECTION
SHIELDS AVENUE (THROUGH INTERSECTIONS)
MADISON AVE. (STA. 16+86 TO STA. 17+98)
ARTHUR AVE. (STA. 19+76 TO STA. 21+20)



PROPOSED TYPICAL SECTION
SHIELDS AVENUE (THROUGH INTERSECTIONS)
RAYMOND AVENUE (STA. 13+57 TO STA. 14+47)



PROPOSED TYPICAL SECTION
SHIELDS AVENUE (THROUGH INTERSECTIONS)
BLANCHAN AVENUE (STA. 3+65 TO STA. 4+32)
DUBOIS AVENUE (STA. 6+94 TO STA. 7+70)
DEYO AVENUE (STA. 10+32 TO STA. 11+04)

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TYPICAL SECTIONS	
SCALE: NONE	SHEET NO. 3 OF 3 SHEETS
STA.	TO STA.

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	8
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

E.H.E. PROJECT NO. 125-15-02401

LEGEND OF SYMBOLS					
SYMBOL	DESCRIPTION	CODE & SIZE	SYMBOL	DESCRIPTION	CODE & SIZE
		W20-3 48"x48"			M4-9 30"x24"
		W20-2 48"x48"			M4-9 30"x24"
		R11-4 60"x30"			M4-9R 24"x30"
		R11-4 60"x30"			M4-9L 24"x30"
		M3-1 24"x12"			M4-10 48"x18"
		M3-1 24"x12"			M4-10 48"x18"
		M4-8 36"x12"			
		M4-8 24"x18"			
		M4-9 30"x24"			

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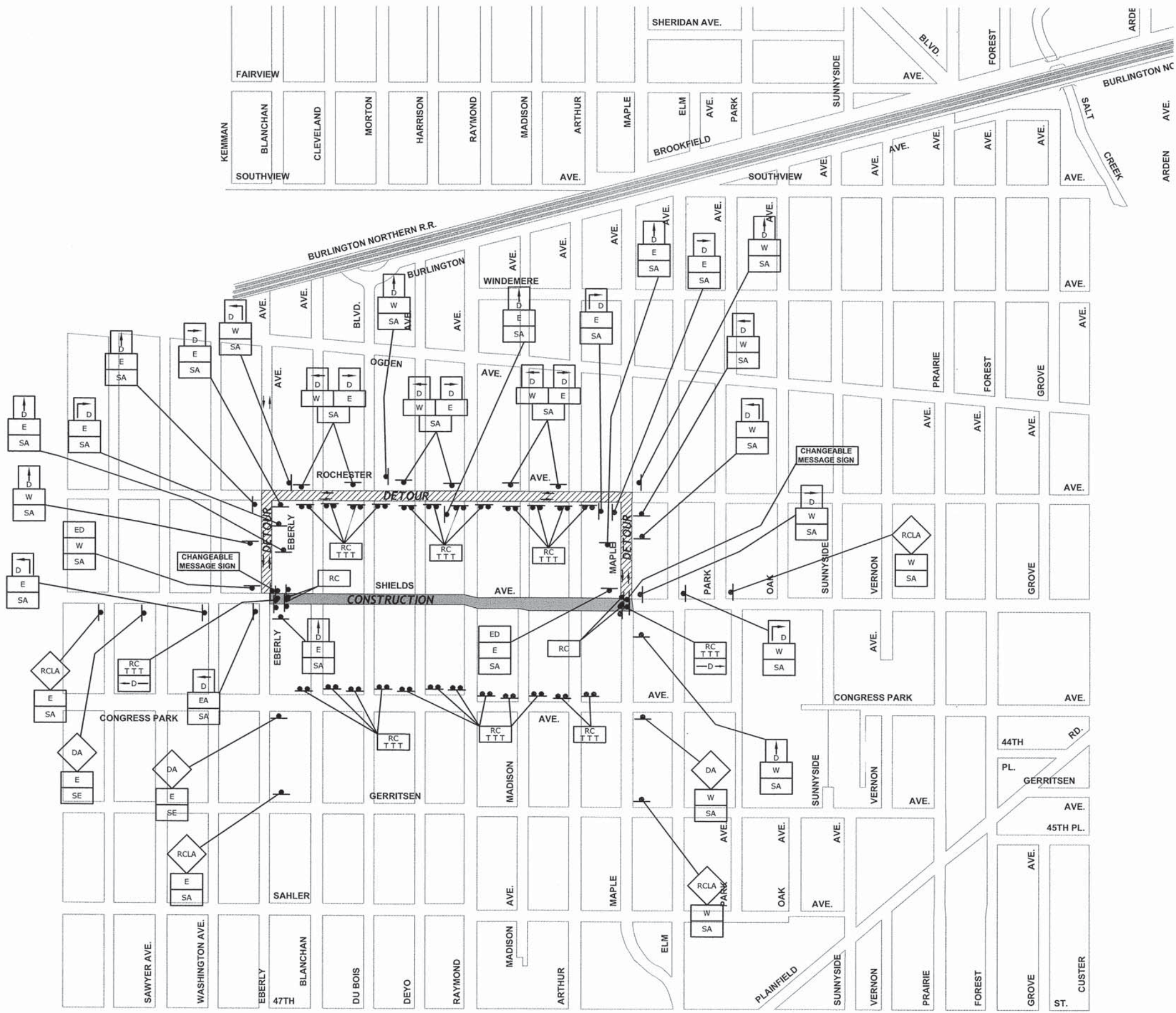
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 REVISED -

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DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC
LEGEND OF SYMBOLS

SCALE: NOT TO SCALE SHEET NO. 1 OF 2 SHEETS STA. TO STA.

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	9
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		



NOTES:

1. ANY LOCAL DETOURS SHALL BE APPROVED BY THE VILLAGE AT LEAST 48 HOURS PRIOR TO INSTALLATION.
2. THE TWO CHANGEABLE MESSAGE SIGNS ARE TO BE ON SITE AND FUNCTIONING FOR 1 WEEK PRIOR TO SHIELDS AVE. BEING CLOSED.
3. INTERSECTIONS ARE TO REMAIN OPEN AT ALL TIMES, PAID FOR AS TEMPORARY ACCESS (ROAD), EXCEPT FOR PREPARATION, POURING AND CURING OF NEW PAVEMENT. THE CONTRACTOR MUST STAGGER INTERSECTIONS THAT ARE CLOSED SUCH THAT NO TWO INTERSECTIONS ADJACENT TO EACH OTHER ARE CLOSED AT THE SAME TIME.

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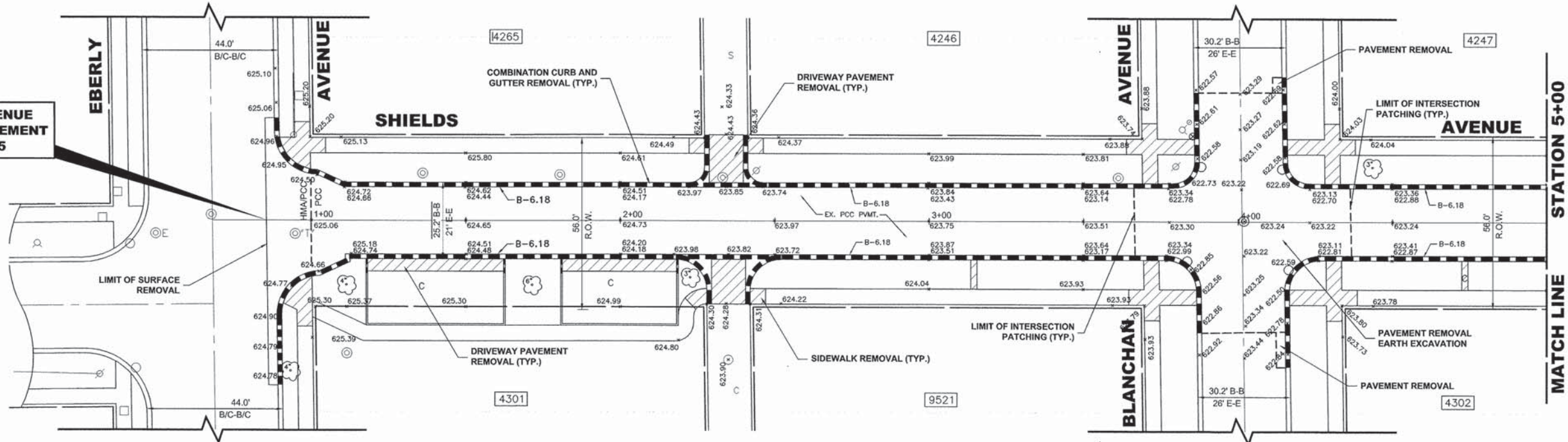
**MAINTENANCE OF TRAFFIC DETOUR
 FOR THROUGH TRAFFIC SIGNING PLAN**

SCALE: NOT TO SCALE SHEET NO. 2 OF 2 SHEETS STA. TO STA.

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	10
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		

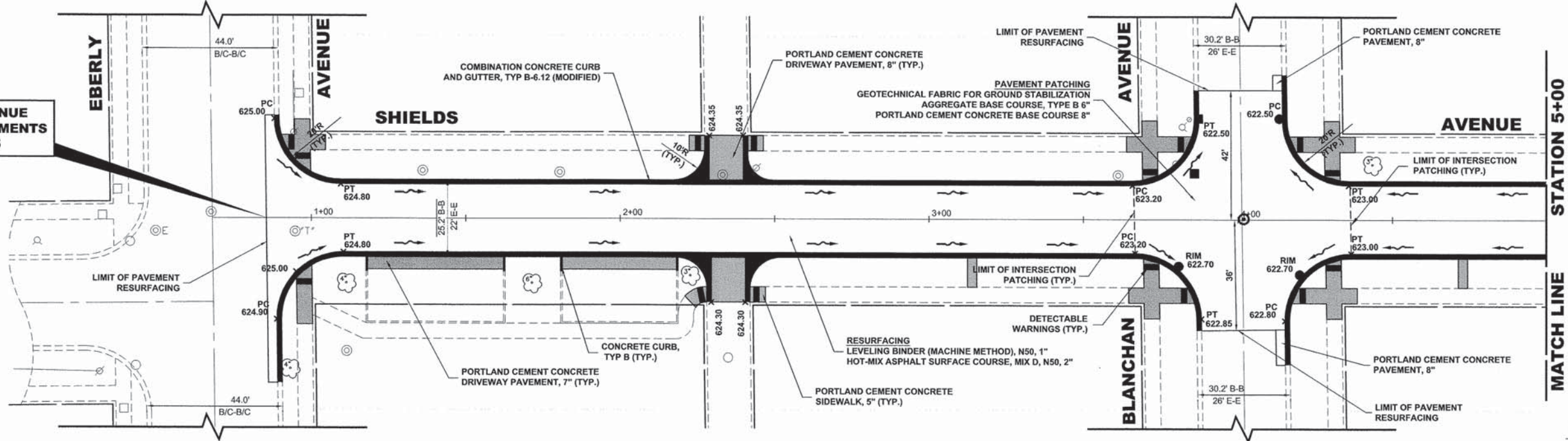
ILLINOIS FED. AID PROJECT M-4003 (500)

SHIELDS AVENUE
BEGIN IMPROVEMENT
STA. 0+85

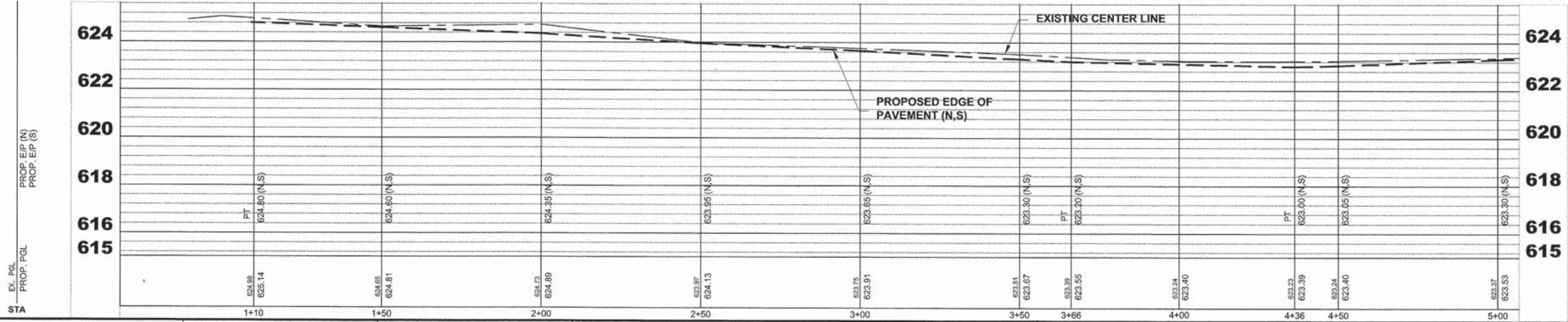


EXISTING TOPOGRAPHY

SHIELDS AVENUE
BEGIN IMPROVEMENTS
STA. 0+85



PROPOSED IMPROVEMENTS



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DATE - 10-12-15	REVISED -

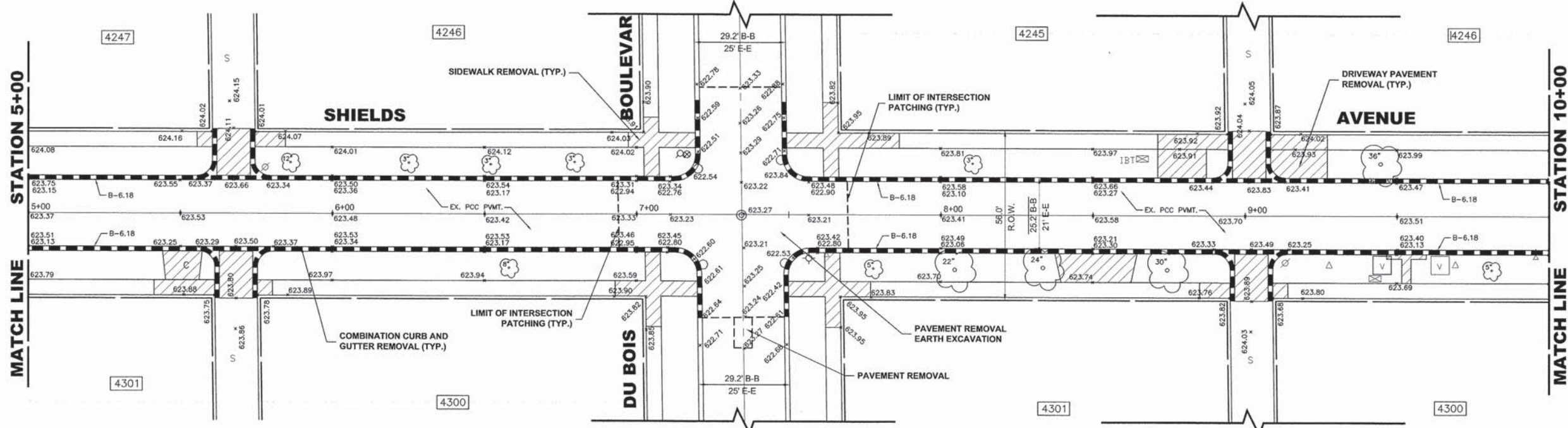
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**SHIELDS AVENUE
PAVING PLAN AND PROFILE**

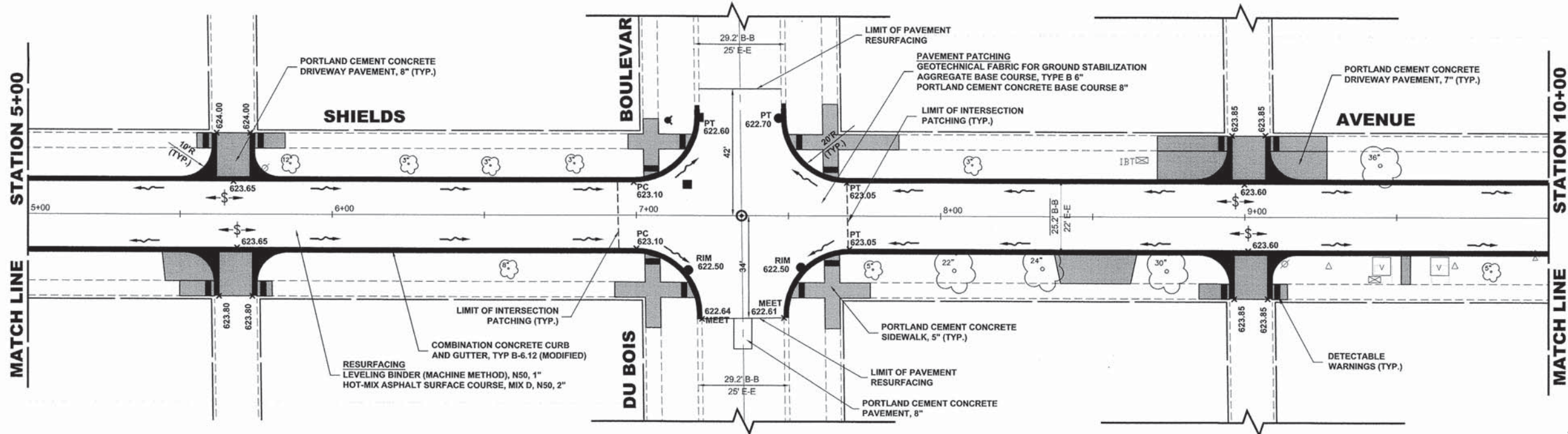
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MS RTE. 1365	SECTION 15-00128-00-RS	COUNTY COOK	TOTAL SHEETS 35	SHEET NO. 11
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

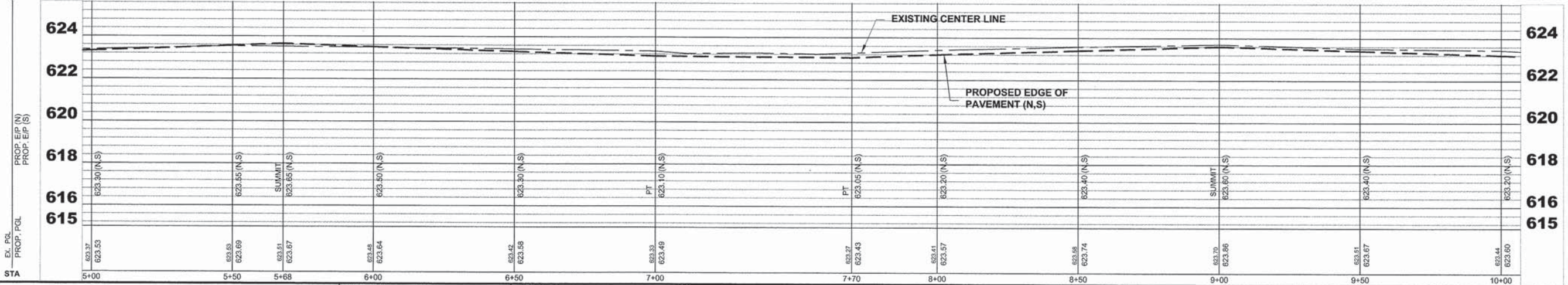
E.H.E. PROJECT NO. 125-15-02401



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS



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DATE - 10-12-15	REVISED -

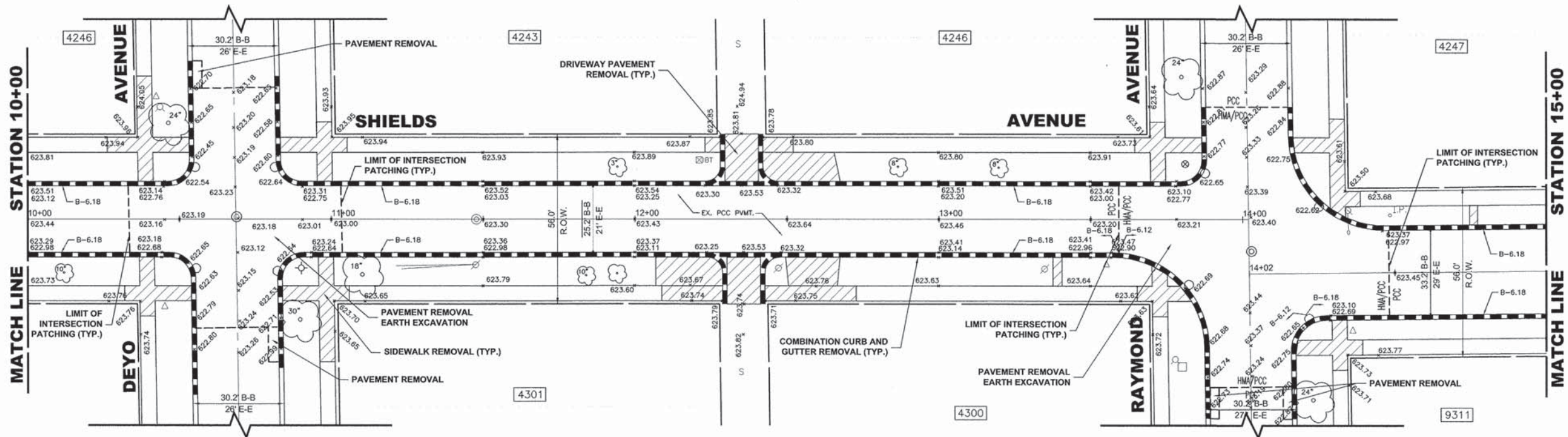
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 DEPARTMENT OF TRANSPORTATION**

**SHIELDS AVENUE
 PAVING PLAN AND PROFILE**

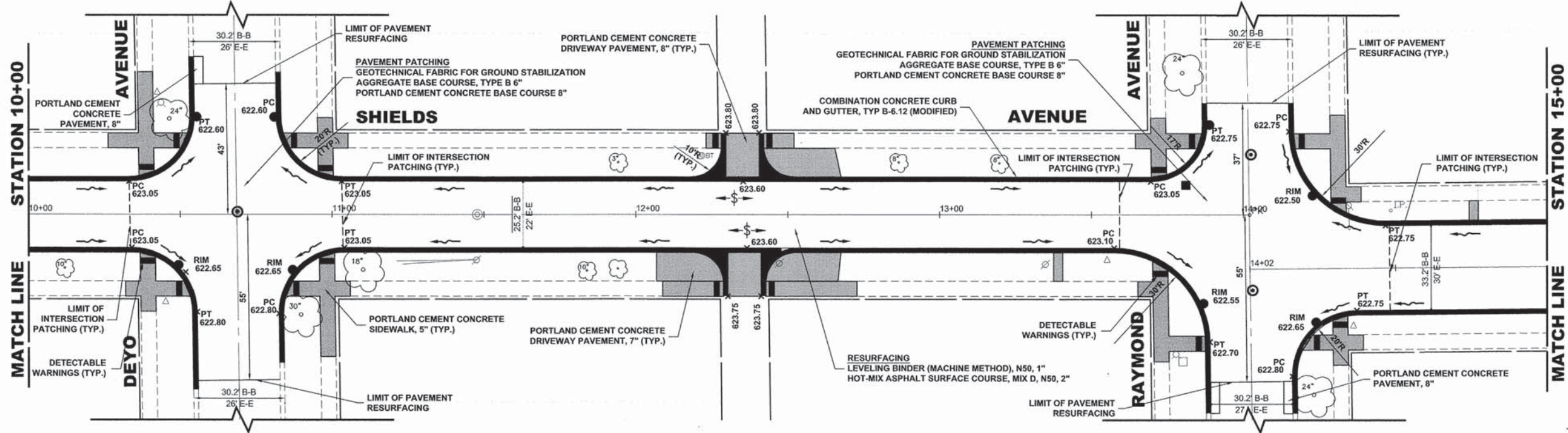
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MS RTE. 1365	SECTION 15-00128-00-RS	COUNTY COOK	TOTAL SHEETS 35	SHEET NO. 12
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

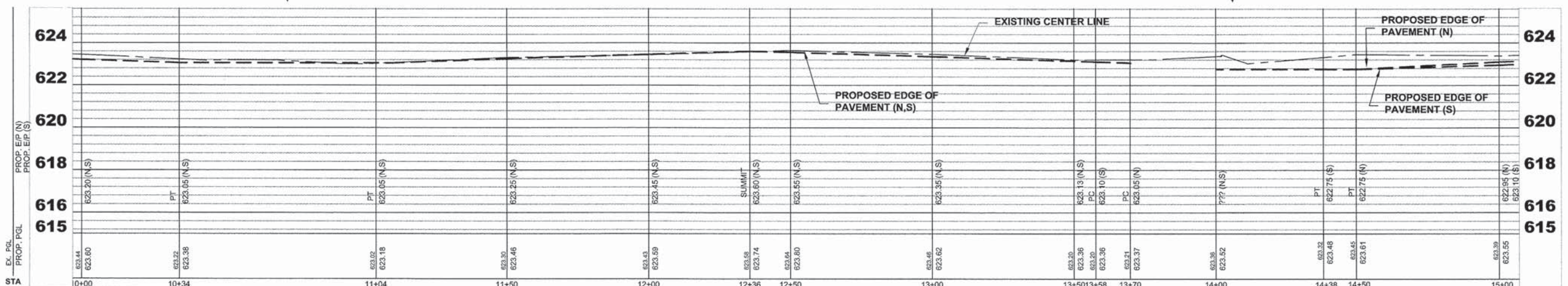
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EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS



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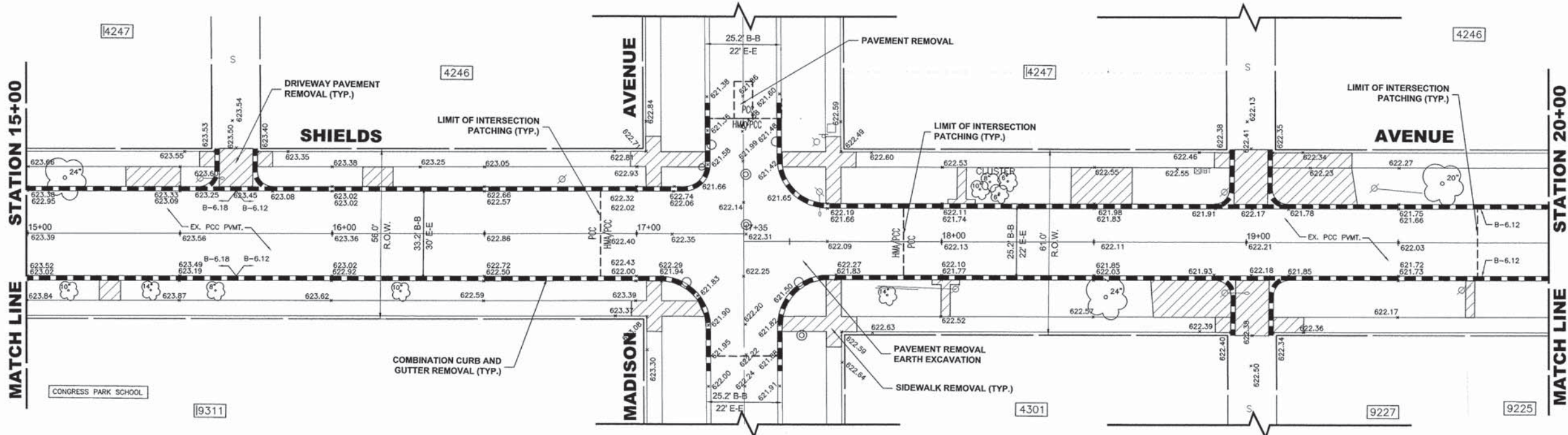
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DATE - 10-12-15	REVISED -

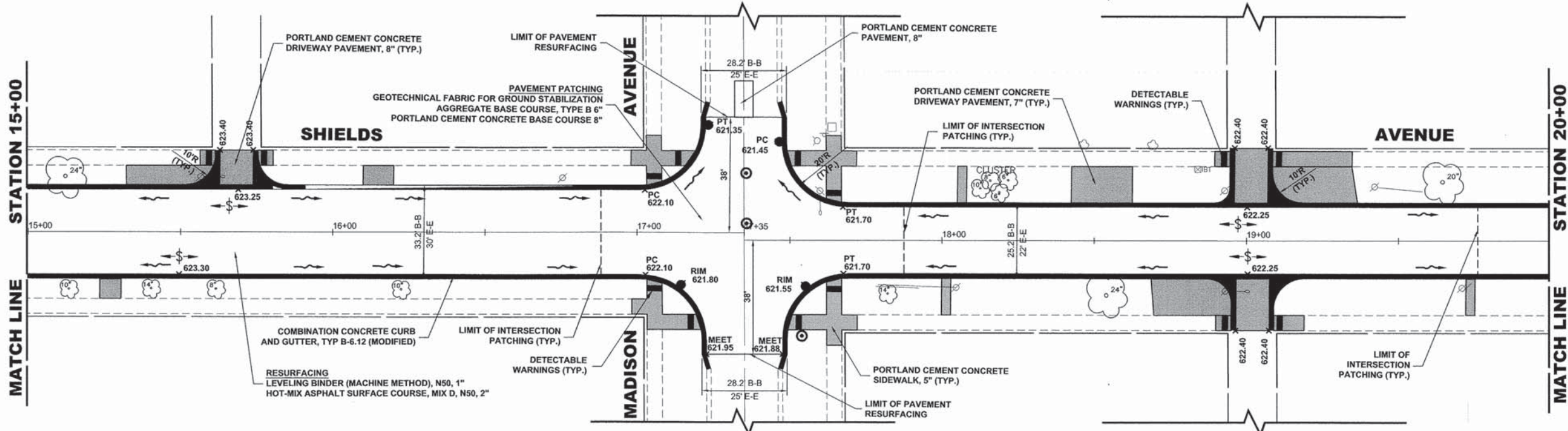
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHIELDS AVENUE
PAVING PLAN AND PROFILE
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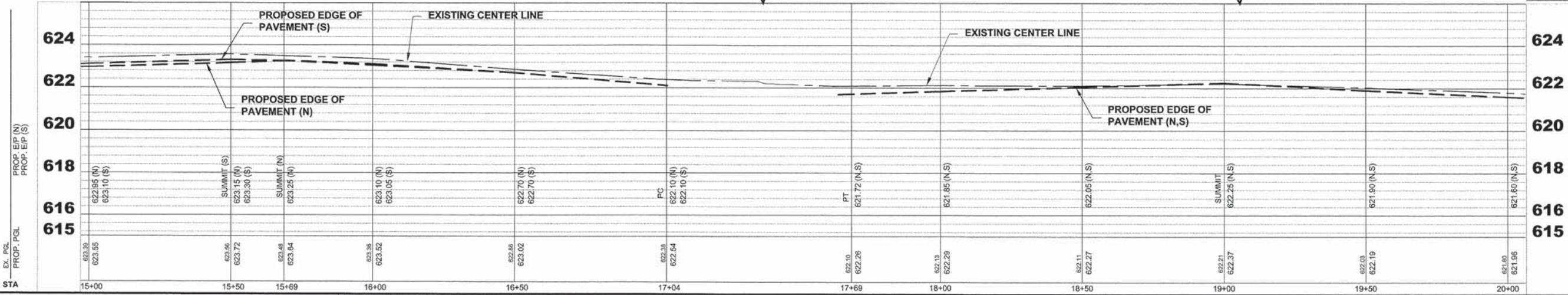
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FIELD BOOK NO. : 1589		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT	M-4003 (500)	E.H.E. PROJECT NO. 125-15-02401



EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS



Drawing file: W:\Projects_by_Village\Roads\Improvements\Site\Shields_Avenue.dwg Oct 16, 2015 - 10:09am



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DESIGNED - JCG	REVISED -
DRAWN - MK, DMM	REVISED -
CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

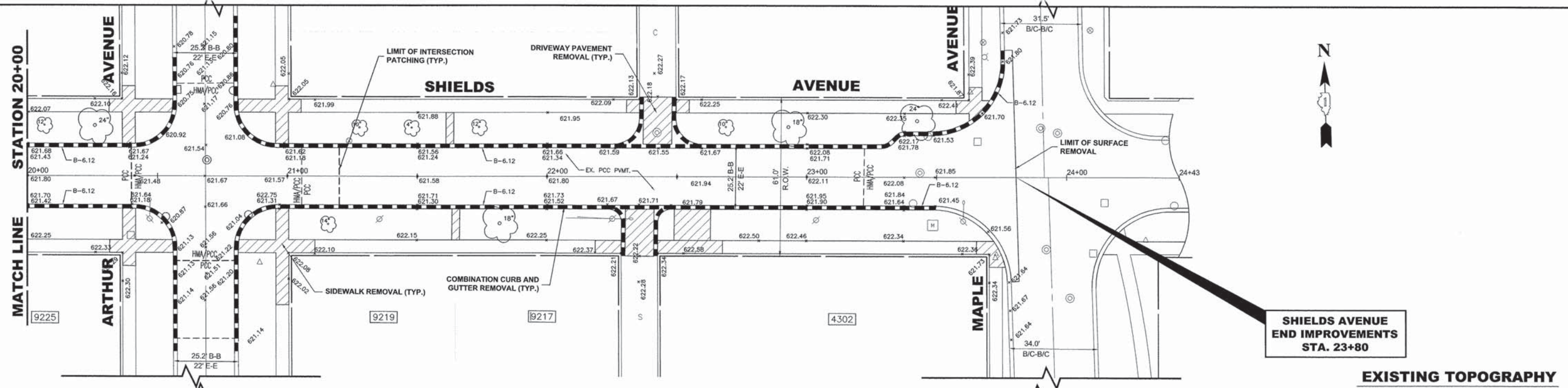
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**SHIELDS AVENUE
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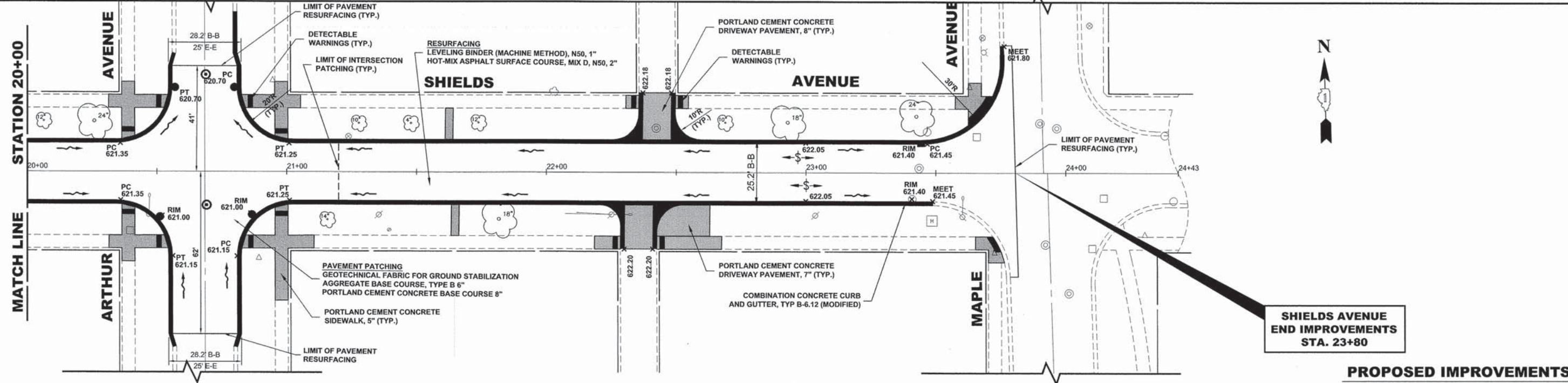
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FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		
E.H.E. PROJECT NO. 125-15-02401				

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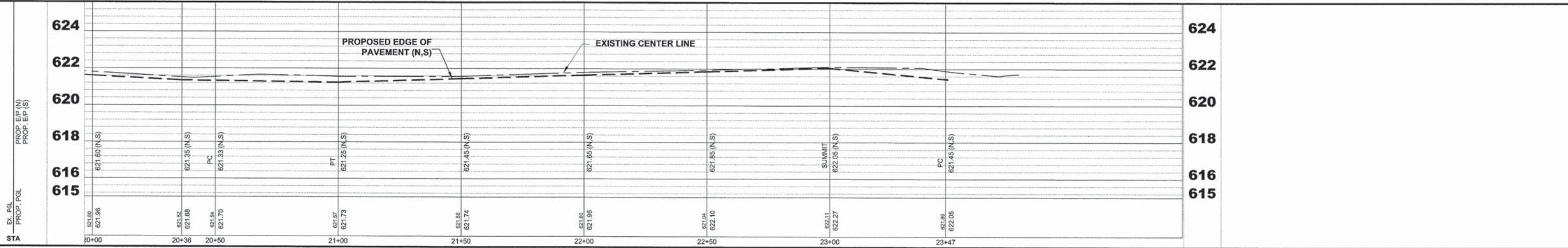
**SHIELDS AVENUE
END IMPROVEMENTS
STA. 23+80**

EXISTING TOPOGRAPHY



**SHIELDS AVENUE
END IMPROVEMENTS
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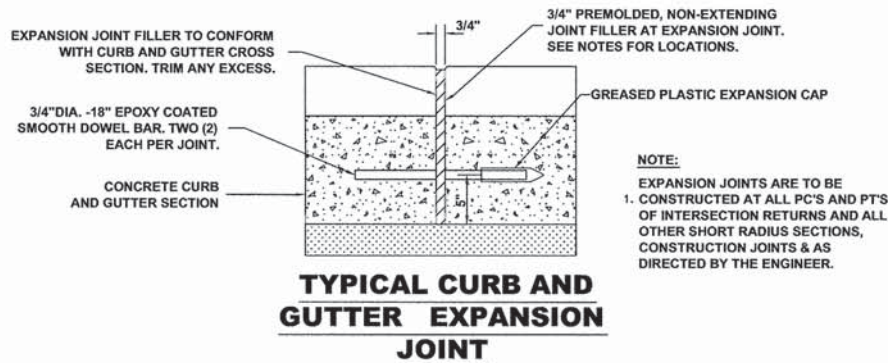
DESIGNED - JCG	REVISED -
DRAWN - MK, DMM	REVISED -
CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SHIELDS AVENUE
PAVING PLAN AND PROFILE**

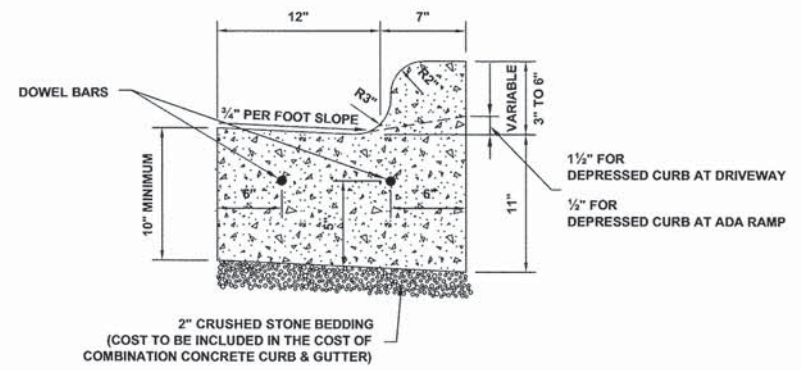
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FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		E.H.E. PROJECT NO. 125-15-02401



TYPICAL CURB AND GUTTER EXPANSION JOINT

NOTE:
EXPANSION JOINTS ARE TO BE
1. CONSTRUCTED AT ALL PC'S AND PT'S
OF INTERSECTION RETURNS AND ALL
OTHER SHORT RADIUS SECTIONS,
CONSTRUCTION JOINTS & AS
DIRECTED BY THE ENGINEER.



**COMBINATION CONCRETE CURB & GUTTER
TYPE B-6.12 (MODIFIED)**

GENERAL NOTES

DEPRESSED CURBS - THE TOP OF CURBS SHALL BE DEPRESSED WHERE THE CURB AND GUTTER IS CONSTRUCTED AT HANDICAP ACCESSIBLE SIDEWALK RAMP AT ALLEY RETURNS AND STREET INTERSECTIONS, AND FOR PRIVATE AND COMMERCIAL DRIVES AND AS DIRECTED BY THE ENGINEER

DRAINAGE OPENINGS - AT ALL LOCATIONS WHERE CASTINGS ARE TO BE INCORPORATED IN THE CURB AND GUTTER, A 3/4" EXPANSION JOINT SHALL BE INSTALLED IN THE CURB AND GUTTER A DISTANCE OF 5 FT. FROM EACH SIDE OF THE CASTING. 2-NO. 4 RE-BARS, 9' IN LENGTH, SHALL BE INCORPORATED IN THE CONTINUOUS PORTION OF CONCRETE CURB BEHIND THE CASTING.

DETECTABLE WARNINGS - DETECTABLE WARNINGS SHALL BE INSTALLED AT HANDICAP ACCESSIBLE SIDEWALK RAMP, AT ALLEY RETURNS, AND STREET INTERSECTIONS. THESE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE IDOT STANDARDS.

SLIPFORM CONSTRUCTION - VERTICAL FACES MAY BE BATTERED AT THE RATE OF 3/4" PER FOOT OF HEIGHT TO AID IN SLIPFORM OPERATIONS. THE PROPOSED CURB HEIGHT IS VARIABLE.

DEPRESSED CURB HEIGHT - THE HEIGHT OF THE DEPRESSED CURB SHALL BE 1-1/2" AT DRIVEWAYS. SEE IDOT STANDARD 424001-05 FOR HEIGHT AT SIDEWALK RAMP.

BITUMINOUS EXPANSION JOINTS - THREE QUARTER INCH (3/4") BITUMINOUS PREMOLDED INORGANIC FIBER EXPANSION JOINTS SHALL BE INSTALLED WHERE NEW SIDEWALK OR CURB AND GUTTER OR DRIVEWAY PAVEMENT ABUTS AN EXISTING CONCRETE WALK, DRIVE, OR CURB WHICH IS TO REMAIN IN PLACE, AND AT NOT LESS THAN NINETY FOOT (90') INTERVALS AT LOCATIONS WHERE CURB REPLACEMENT IS IN EXCESS OF NINETY FEET (90'); AT RADIUS POINTS, AT BOTH SIDES OF FRAMES AND GRATES WHICH FALL IN THE CURB; AND AS DIRECTED BY THE ENGINEER.

ALL EXPANSION JOINTS LOCATED IN THE CURB AND GUTTER SHALL HAVE TWO (2) THREE QUARTER INCH (3/4") DIAMETER, SMOOTH, ROUND, EPOXY COATED DOWEL BARS, EIGHTEEN INCHES (18") IN LENGTH, WITH GREASED PLASTIC END CAPS INSERTED TO ALLOW THE CURB AND GUTTER TO EXPAND AND CONTRACT LATERALLY. CONTRACTION JOINTS SHALL BE TOOLED INTO THE CURB AND GUTTER AT INTERVALS NOT TO EXCEED FIFTEEN FEET (15'). THESE CONTRACTION JOINTS SHALL BE SAW CUT TO A DEPTH OF TWO INCHES (2") WITHIN TWENTY-FOUR (24) HOURS OF CONCRETE PLACEMENT AND CAULKED WITHIN SEVEN (7) DAYS. THE COST OF THE ABOVE WORK SHALL BE INCLUDED IN THE RESPECTIVE ITEMS FOR CONCRETE INSTALLATION.

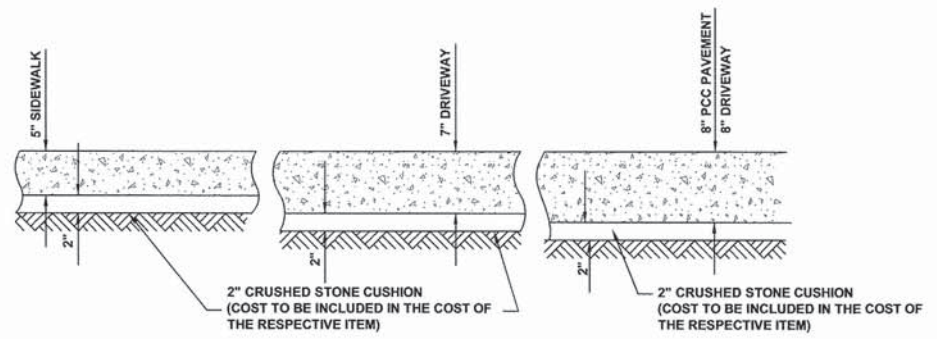
CURB AND GUTTER REMOVAL

THE COSTS FOR REMOVAL OF ANY ASPHALT OVERLAY THAT EXTENDS INTO THE GUTTER PORTION OF THE CURB AND GUTTER WILL BE INCLUDED IN THE PRICE FOR COMBINATION CURB AND GUTTER REMOVAL.

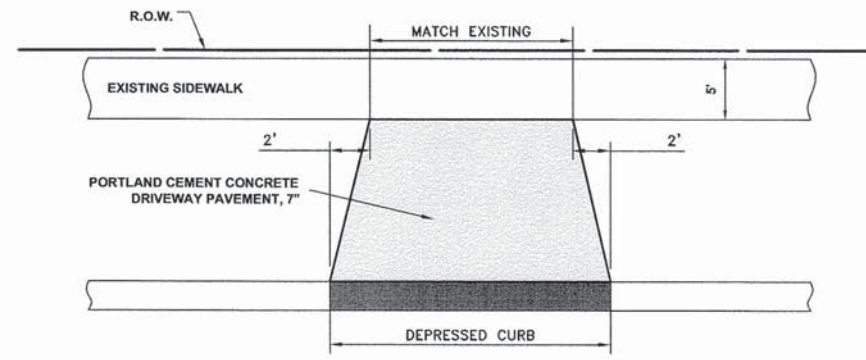
THE EDWIN HANCOCK ENGINEERING COMPANY AND THE VILLAGE PUBLIC WORKS DEPARTMENT SHALL BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY.

UNDERCUT AND POROUS GRANULAR EMBANKMENT (PGE)

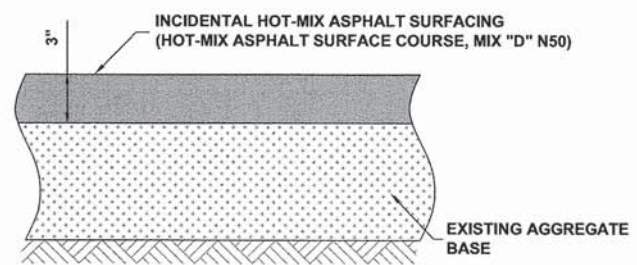
A QUANTITY OF POROUS GRANULAR EMBANKMENT, SUBGRADE (PGES), HAS BEEN PROVIDED FOR USE IF THE EXISTING SOILS ARE UNSUITABLE OR UNSTABLE. THE ACTUAL NEED FOR REMOVAL AND REPLACEMENT WITH PGES WILL BE DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION BY THE ENGINEER. ALL POTENTIALLY UNSTABLE SOILS SHALL BE TESTED WITH A STATIC CONE PENETROMETER AND TREATED IN ACCORDANCE WITH ARTICLE 301.03 AND THE UNDERCUT GUIDELINES IN THE IDOT SUBGRADE STABILITY MANUAL. IF UNSUITABLE MATERIAL IS ENCOUNTERED, THE SOIL SHALL BE REMOVED AND REPLACED WITH PGES AS DETERMINED BY THE ENGINEER. IF UNSUITABLE MATERIAL IS NOT ENCOUNTERED, THEN THE QUANTITY OF PGES WILL REMAIN UNUSED AND NO ADDITIONAL COMPENSATION WILL BE DUE TO THE CONTRACTOR. THE 3-INCH CAPPING AGGREGATE (CA-6 GRADATION) WILL NOT BE REQUIRED SINCE GRANULAR SUBBASE WILL BE PLACED ON TOP OF THE PGE.



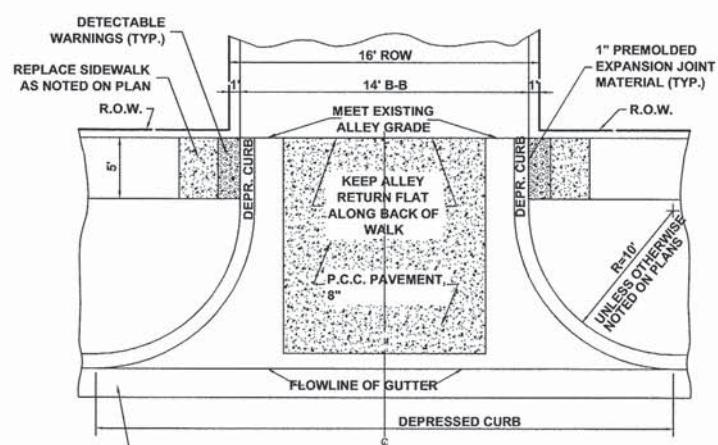
**TYPICAL P.C.C. SIDEWALK, DRIVEWAY,
AND PAVEMENT**



DRIVEWAY DETAIL



INCIDENTAL HOT-MIX ASPHALT SURFACING



NOTE: UNLESS OTHERWISE NOTED ON PLAN USE RADII AS MARKED ABOVE.
PROP. COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.12 (MODIFIED)

ALLEY RETURN

Drawing File: W:\Projects_by_Village\Brookfield\1515024 - Shields Ave Improvements\16_Roadway-Details.dwg Oct 13, 2015 - 10:09am

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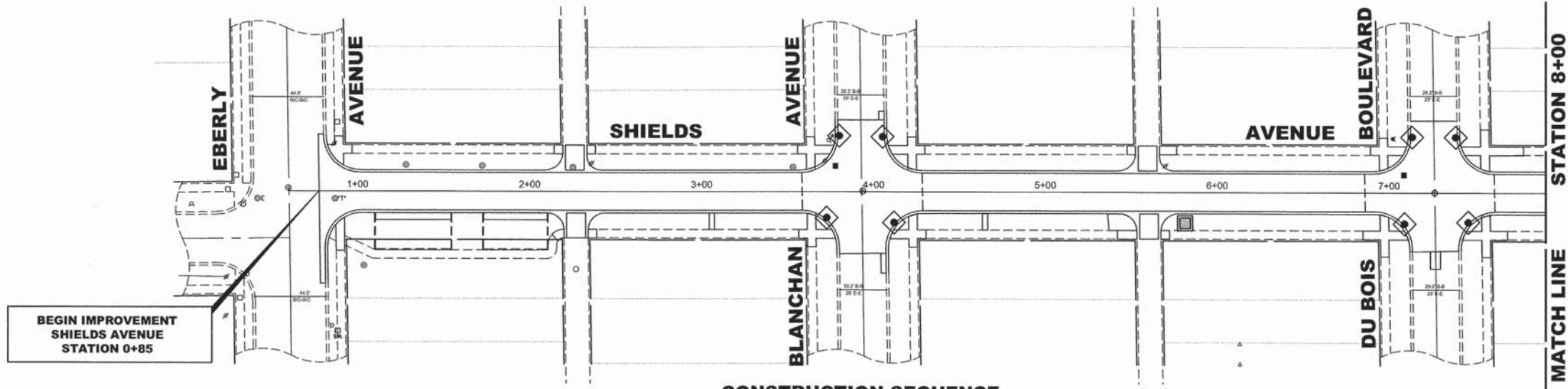
DESIGNED - JCG	REVISED -
DRAWN - MK, DMM	REVISED -
CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

ROADWAY DETAILS

SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.
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MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	16
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		
E.H.E. PROJECT NO. 125-15-02401				



BEGIN IMPROVEMENT
SHIELDS AVENUE
STATION 0+85



NOTES

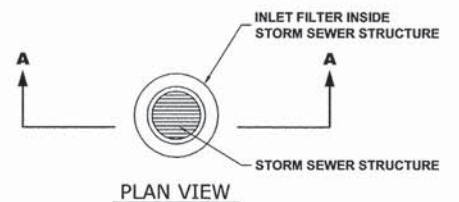
- SEE IDOT STANDARD 280001-07 FOR TEMPORARY EROSION CONTROL SYSTEMS.
- THE CONTRACTOR SHALL ENSURE THAT ADJACENT PROPERTIES REMAIN PROTECTED FROM SEDIMENT DEPOSITION.
- SOIL STOCKPILES SHALL BE PROTECTED WITH PERIMETER EROSION BARRIER OR OTHER EROSION PROTECTION SPECIFIED BY THE RESIDENT ENGINEER. THE COST SHALL BE INCLUDED IN THE UNIT PRICE FOR THE INDIVIDUAL SOIL MATERIALS.
- WHEREVER CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY RUNOFF OR VEHICLE TRACKING ONTO THE PAVED SURFACE. THE PROVISIONS MAY INCLUDE SPRAYING VEHICLE WHEELS TO CLEAR SEDIMENT BEFORE EXITING THE CONSTRUCTION SITE OR OTHER MEASURES APPROVED BY THE ENGINEER.
- INLET FILTERS SHALL BE PAID FOR UNDER THE PAY ITEM FOR INLET FILTERS. THE COST OF THE CONCRETE WASHOUTS SHALL BE INCLUDED IN THE COST OF THE CONTRACT.
- INLET FILTER SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE REMOVED AFTER CONSTRUCTION IS COMPLETED. FILTERS WILL BE INSPECTED WEEKLY AND THE CONTRACTOR WILL BE NOTIFIED OF ANY CORRECTIVE MEASURES THAT WILL BE REQUIRED TO BE MADE BY THE CONTRACTOR.

CONSTRUCTION SEQUENCE :

- INSTALL EROSION CONTROL MEASURES
- COMPLETE ALL UNDERGROUND WORK
- PAVEMENT PATCHING
- RESURFACE PAVEMENTS
- RESTORE DAMAGED AREAS ADJACENT TO IMPROVEMENTS
- REMOVE EROSION CONTROL MEASURES

LEGEND

SYMBOL	DESCRIPTION
	INLET FILTER/SEDIMENT CONTROL, DRAINAGE STRUCTURE, INLET FILTER CLEANING
	CONCRETE WASHOUT



EROSION AND SEDIMENT CONTROL PLAN

THE EXISTING LAND COVER CONSISTS OF PAVED STREETS WITH MINOR GRASS PARKWAYS LOCATED IN A RESIDENTIAL AREA. THE AREAS ADJACENT TO THE PROJECT SITE ARE COMPRISED OF DENSE RESIDENTIAL PROPERTIES. FLOOD PROTECTION AREAS AND POINTS OF DISCHARGE TO JURISDICTIONAL WATERS OF THE U.S. DO NOT EXIST ON THIS PROJECT. WE DO NOT BELIEVE THERE ARE ANY AREAS SUSCEPTIBLE TO EROSION OR SEDIMENTATION DUE TO THESE IMPROVEMENTS. SOIL DATA IS NOT AVAILABLE BUT, PAST PROJECTS IN THE SUBJECT VILLAGE CONCLUDE THAT THE EXISTING SOIL CONSISTS OF CLAY WITH SOME MINOR SILT AND TRACES OF SAND.

PRIOR TO ANY SOIL/PAVEMENT DISTURBANCE, INLET FILTER ASSEMBLIES SHALL BE INSTALLED AS SHOWN ON PLANS.

THE INLET FILTER, PRIMARY PURPOSE IS TO TRAP SEDIMENT, REQUIRED FOR THIS PROJECT WILL BE A DROP IN INLET PROTECTION DEVICE SIMILAR TO FLEXSTORM INLET FILTERS. INLET FILTERS OF THIS TYPE HAVE BEEN USED ON PAST PROJECTS OF SIMILAR SIZE AND SCOPE AND HAVE HAD SATISFACTORY RESULTS.

THE INLET FILTER ASSEMBLY SHALL BE APPROVED BY THE ENGINEER OR VILLAGE PRIOR TO ORDERING AND INSTALLATION. THE INLET FILTER SHALL BE INSPECTED WEEKLY AND AFTER A 0.5 INCH RAIN EVENT BY THE ENGINEER. THE ENGINEER WILL REPORT ANY ISSUES, VIA VERBAL OR WRITTEN COMMUNICATION, THAT NEED TO BE ADDRESSED BY THE CONTRACTOR.

MAINTENANCE OF THE PROPOSED INLET FILTER WILL BE PER MANUFACTURE RECOMMENDATIONS AND WILL BE DONE BY THE CONTRACTOR. TYPICAL MAINTENANCE PRACTICES INCLUDE INSPECTION AFTER A RUNOFF EVENT, SEDIMENT REMOVAL AT 50% CAPACITY, AND REPAIRS/REPLACEMENT AS NEEDED.

PRIOR TO ANY PORTLAND CEMENT CONCRETE (PCC) POUR, CONCRETE WASHOUT BOXES SHALL BE INSTALLED AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

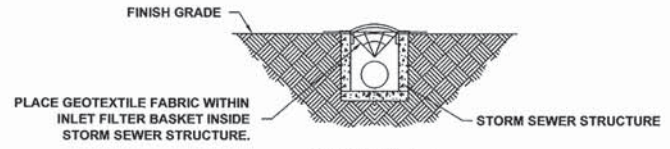
CONCRETE WASHOUT BOXES, PRIMARY PURPOSE IS TO CONTAIN CONCRETE LIQUIDS AND PREVENT CONCRETE LIQUID RUNOFF FROM ENTERING SEWERS OR WATERWAYS, REQUIRED FOR THIS PROJECT WILL CONSIST OF A BARRIER WALL LINED WITH 30-MIL POLYETHYLENE OR AN ENGINEER APPROVED EQUAL WASHOUT. CONCRETE WASHOUT BOXES OF THIS TYPE

HAVE BEEN USED ON PAST PROJECTS OF SIMILAR SIZE AND SCOPE AND HAVE HAD SATISFACTORY RESULTS.

THE PLAN FOR THE CONCRETE WASHOUT BOX SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER OR VILLAGE PRIOR TO INSTALLATION AND WILL BE INSPECTED AFTER INSTALLATION. THE WASHOUT BOX SHALL BE INSPECTED PRIOR TO A CONCRETE POUR AND AFTER A CONCRETE POUR BY THE ENGINEER. THE ENGINEER WILL REPORT ANY ISSUES, VIA VERBAL OR WRITTEN COMMUNICATION, THAT NEED TO BE ADDRESSED BY THE CONTRACTOR.

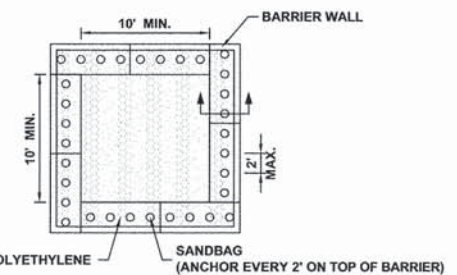
MAINTENANCE OF THE PROPOSED CONCRETE WASHOUT BOXES WILL BE DONE BY THE CONTRACTOR. TYPICAL MAINTENANCE PRACTICES INCLUDE REPLACING DAMAGED LINER, DISPOSING OF SOLIDIFIED CONCRETE WASHOUT, AND REMOVAL OF ANY DISCHARGES WITHIN 24 HOURS.

ALL DISPOSAL OF CONSTRUCTION MATERIAL, SEDIMENT, AND SOLIDIFIED CONCRETE SHALL BE AT A CCDD FACILITY



SECTION A-A

INLET FILTER



PLAN VIEW

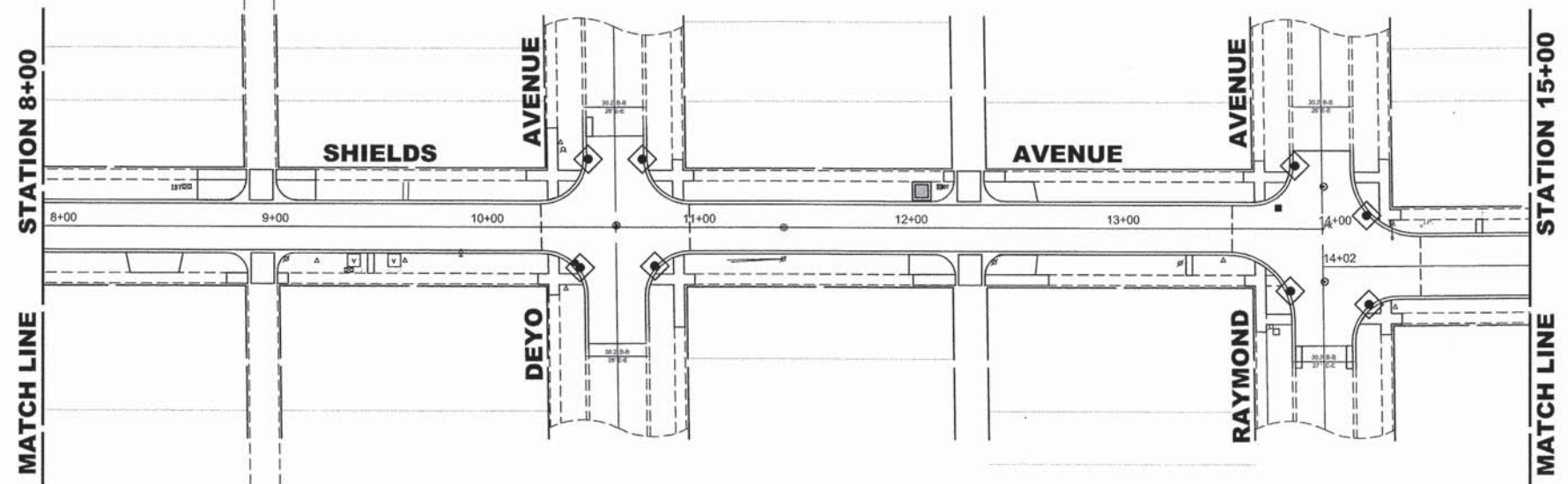


BARRIER WALL ANCHOR SECTION

NOTES

- MAINTAINING TEMPORARY CONCRETE FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDEN CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION.
- FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.

CONCRETE WASHOUT



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CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

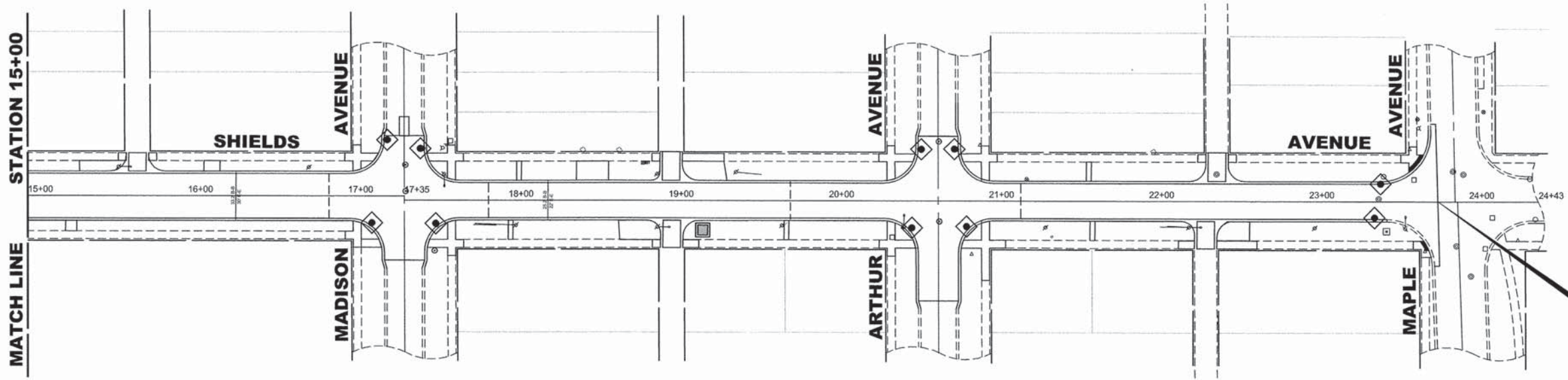
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: 1" = 40'		SHEET NO. 1 OF 2 SHEETS		STA. 0+85	TO STA. 15+00
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EROSION CONTROL PLAN

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	17
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT		M-4003 (500)

E.H.E. PROJECT NO. 125-15-02401



CONSTRUCTION SEQUENCE :

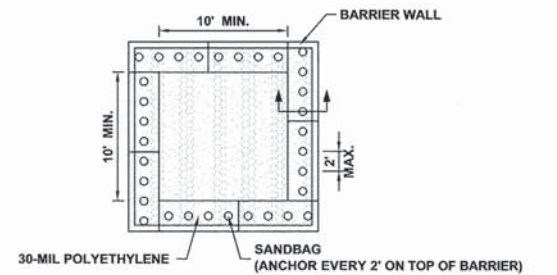
1. INSTALL EROSION CONTROL MEASURES
2. COMPLETE ALL UNDERGROUND WORK
3. PAVEMENT PATCHING
4. RESURFACE PAVEMENTS
5. RESTORE DAMAGED AREAS ADJACENT TO IMPROVEMENTS
6. REMOVE EROSION CONTROL MEASURES

LEGEND

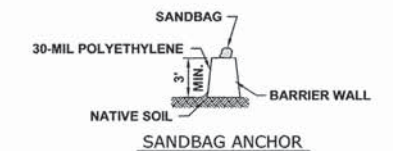
SYMBOL	DESCRIPTION
	INLET FILTER/SEDIMENT CONTROL, DRAINAGE STRUCTURE, INLET FILTER CLEANING
	CONCRETE WASHOUT

NOTES

1. SEE IDOT STANDARD 280001-07 FOR TEMPORARY EROSION CONTROL SYSTEMS.
2. THE CONTRACTOR SHALL ENSURE THAT ADJACENT PROPERTIES REMAIN PROTECTED FROM SEDIMENT DEPOSITION.
3. SOIL STOCKPILES SHALL BE PROTECTED WITH PERIMETER EROSION BARRIER OR OTHER EROSION PROTECTION SPECIFIED BY THE RESIDENT ENGINEER. THE COST SHALL BE INCLUDED IN THE UNIT PRICE FOR THE INDIVIDUAL SOIL MATERIALS.
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PLAN VIEW

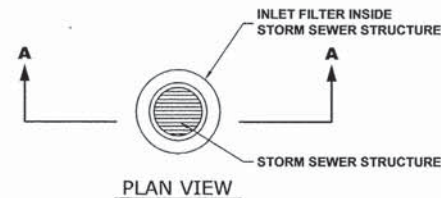


BARRIER WALL ANCHOR SECTION

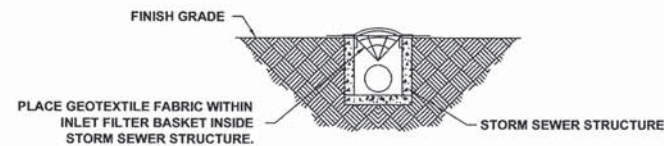
NOTES

1. MAINTAINING TEMPORARY CONCRETE FACILITIES SHALL INCLUDE REMOVING AND DISPOSING OF HARDEN CONCRETE AND/OR SLURRY AND RETURNING THE FACILITIES TO A FUNCTIONAL CONDITION.
2. FACILITY SHALL BE CLEANED OR RECONSTRUCTED IN A NEW AREA ONCE WASHOUT BECOMES TWO-THIRDS FULL.

CONCRETE WASHOUT



PLAN VIEW



SECTION A-A

INLET FILTER

EROSION AND SEDIMENT CONTROL PLAN

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MAINTENANCE OF THE PROPOSED INLET FILTER WILL BE PER MANUFACTURE RECOMMENDATIONS AND WILL BE DONE BY THE CONTRACTOR. TYPICAL MAINTENANCE PRACTICES INCLUDE INSPECTION AFTER A RUNOFF EVENT, SEDIMENT REMOVAL AT 50% CAPACITY, AND REPAIRS/REPLACEMENT AS NEEDED.

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CONCRETE WASHOUT BOXES, PRIMARY PURPOSE IS TO CONTAIN CONCRETE LIQUIDS AND PREVENT CONCRETE LIQUID RUNOFF FROM ENTERING SEWERS OR WATERWAYS, REQUIRED FOR THIS PROJECT WILL CONSIST OF A BARRIER WALL LINED WITH 30-MIL POLYETHYLENE OR AN ENGINEER APPROVED EQUAL WASHOUT. CONCRETE WASHOUT BOXES OF THIS TYPE HAVE BEEN USED ON PAST PROJECTS OF SIMILAR SIZE AND SCOPE AND HAVE HAD SATISFACTORY RESULTS.

THE PLAN FOR THE CONCRETE WASHOUT BOX SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER OR VILLAGE PRIOR TO INSTALLATION AND WILL BE INSPECTED AFTER INSTALLATION. THE WASHOUT BOX SHALL BE INSPECTED PRIOR TO A CONCRETE POUR AND AFTER A CONCRETE POUR BY THE ENGINEER. THE ENGINEER WILL REPORT ANY ISSUES, VIA VERBAL OR WRITTEN COMMUNICATION, THAT NEED TO BE ADDRESSED BY THE CONTRACTOR.

MAINTENANCE OF THE PROPOSED CONCRETE WASHOUT BOXES WILL BE DONE BY THE CONTRACTOR. TYPICAL MAINTENANCE PRACTICES INCLUDE REPLACING DAMAGED LINER, DISPOSING OF SOLIDIFIED CONCRETE WASHOUT, AND REMOVAL OF ANY DISCHARGES WITHIN 24 HOURS.

ALL DISPOSAL OF CONSTRUCTION MATERIAL, SEDIMENT, AND SOLIDIFIED CONCRETE SHALL BE AT A CCDD FACILITY

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DATE -	10-12-15	REVISED -	

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DEPARTMENT OF TRANSPORTATION**

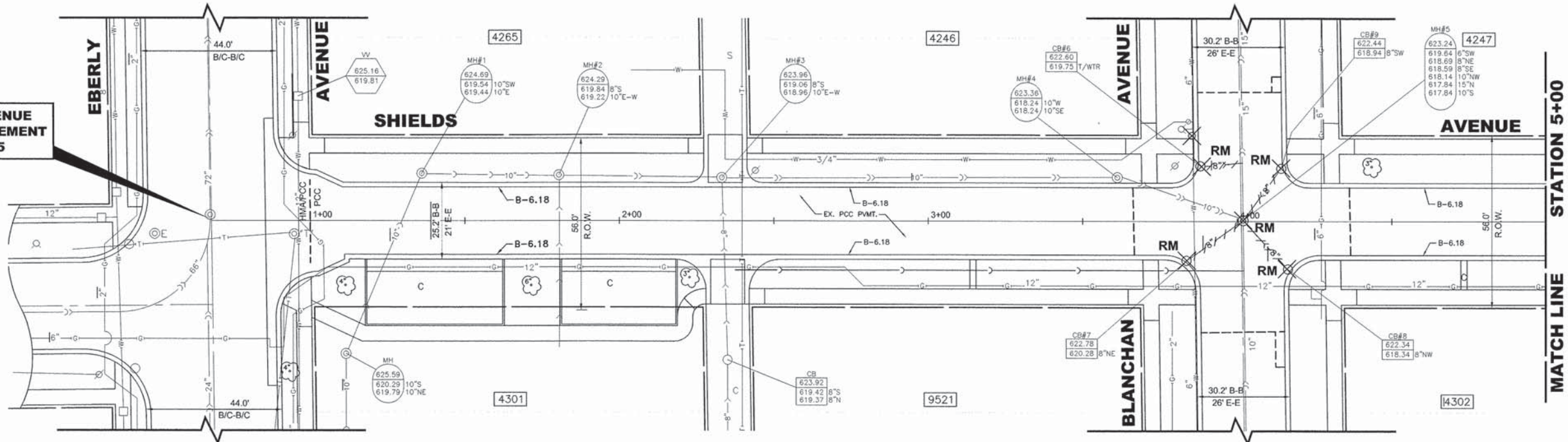
EROSION CONTROL PLAN

SCALE: 1" = 40' SHEET NO. 2 OF 2 SHEETS STA. 15+00 TO STA. 23+80

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	18
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT		M-4003 (500)

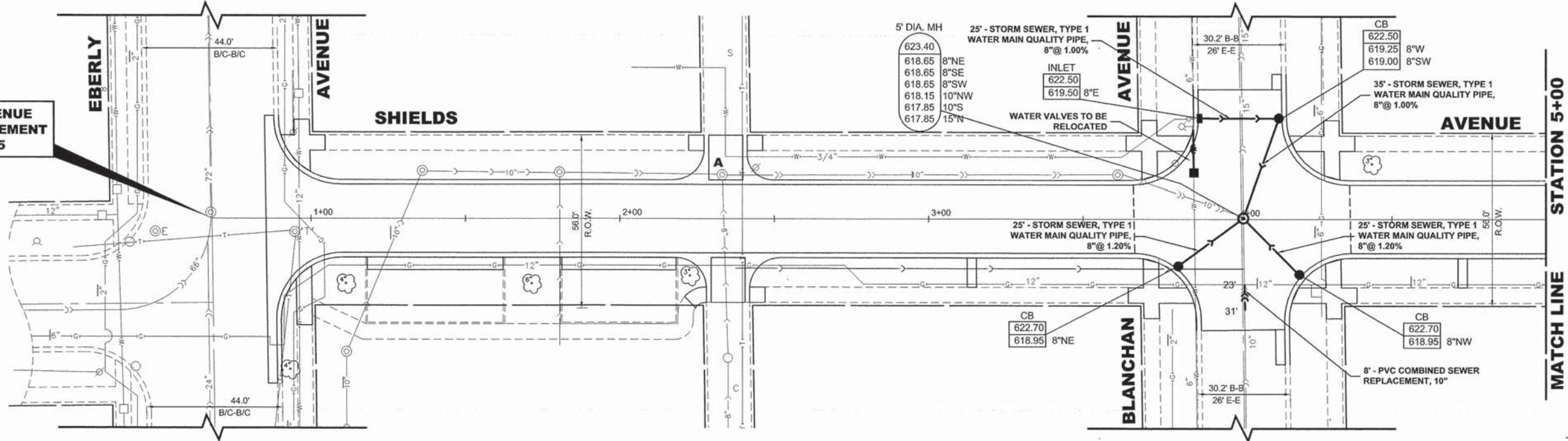
E.H.E. PROJECT NO. 125-15-02401

SHIELDS AVENUE
BEGIN IMPROVEMENT
STA. 0+85



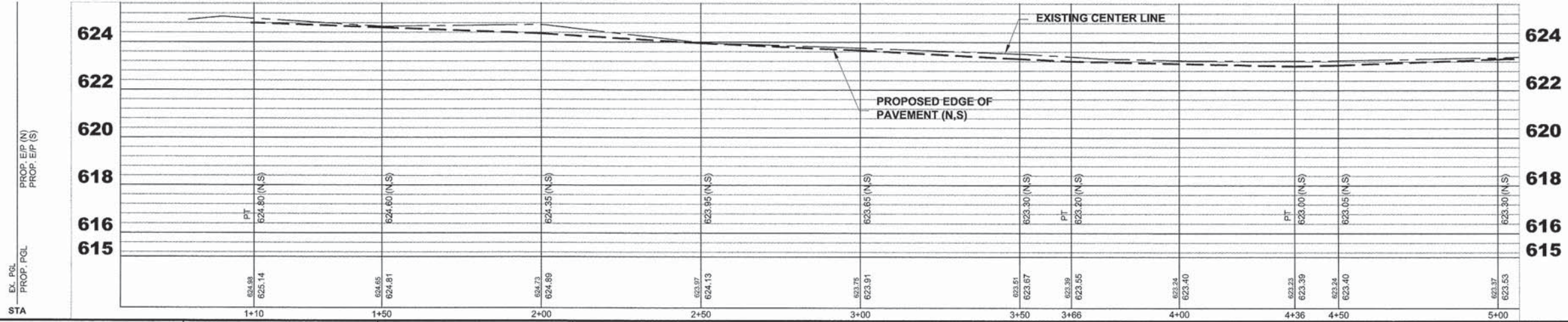
EXISTING TOPOGRAPHY

SHIELDS AVENUE
BEGIN IMPROVEMENT
STA. 0+85



- NOTE:
- FIGURES SHOWN AT SEWER REPAIRS INDICATE DISTANCE FROM MANHOLE.
 - ALL ABANDONED SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FEET LONG, NON-SHRINK CONCRETE/MORTAR PLUG.
 - A 8"x4" CATCH BASIN TRAP AND RESTRICTOR SHALL BE INSTALLED ON ALL PROPOSED CATCH BASINS.

PROPOSED IMPROVEMENTS



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CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

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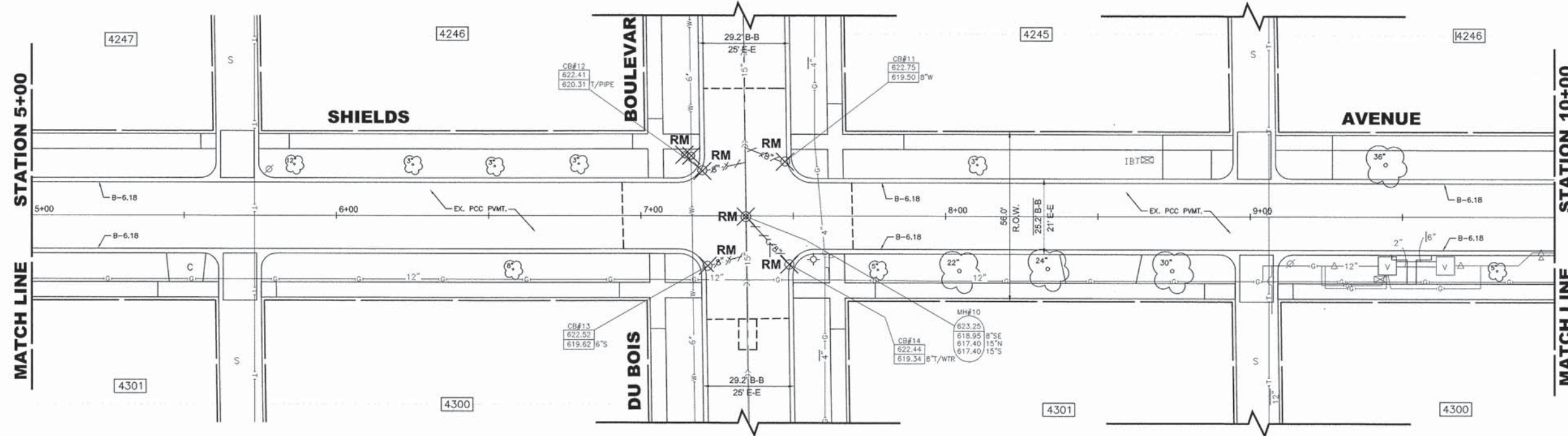
**SHIELDS AVENUE
UTILITIES PLAN AND PROFILE**

SCALE: 1"=20'H, 1"=4'V. SHEET NO. 1 OF 5 SHEETS STA. 0+85 TO STA. 5+00

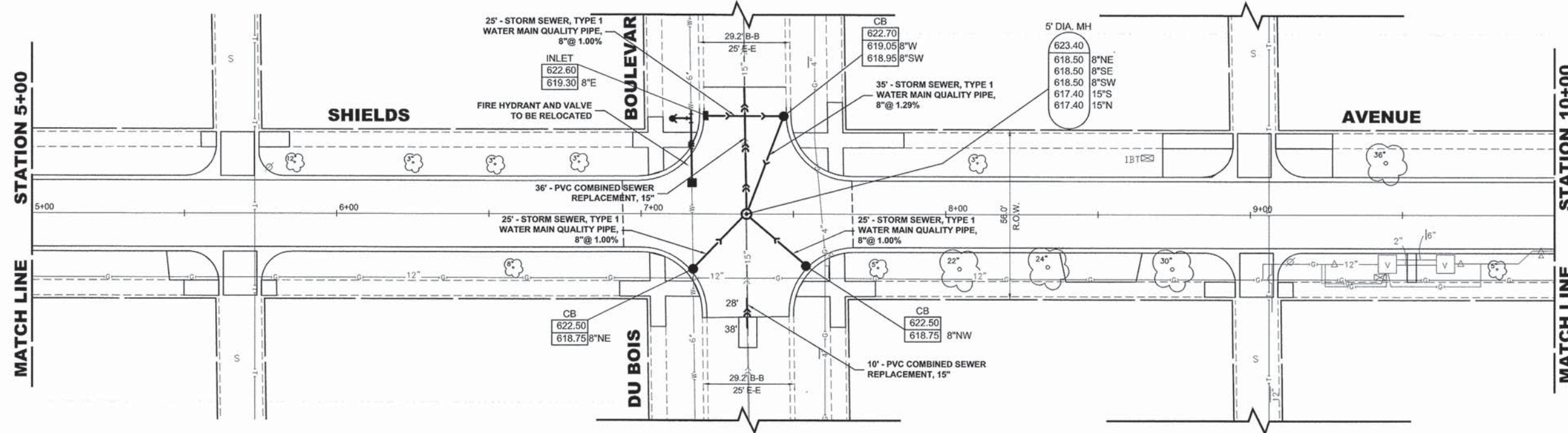
MS. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	19
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

E.H.E. PROJECT NO. 125-15-02401

Drawing file: W:\Projects_by_MW\Shields Ave Improvements\SITE\Shields Ave.dwg Oct 16, 2015 - 9:55am

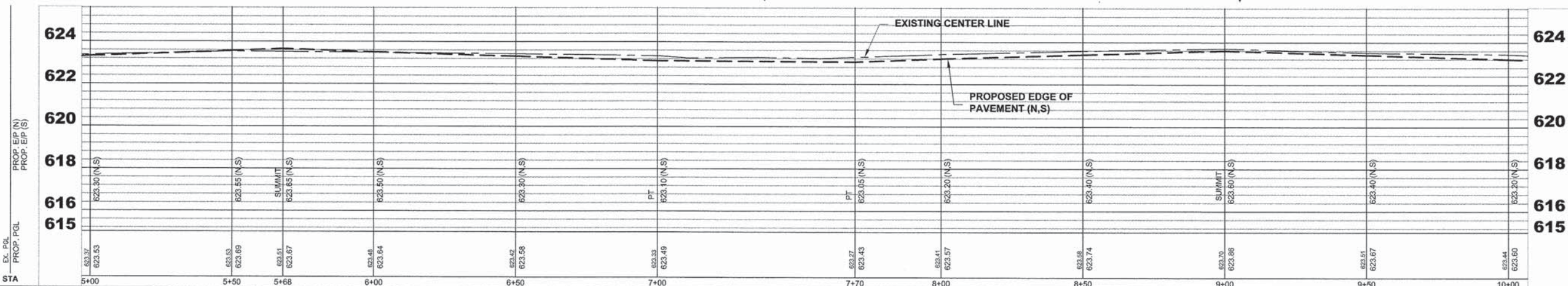


EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS

- NOTE:
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 - A 8"X4" CATCH BASIN TRAP AND RESTRICTOR SHALL BE INSTALLED ON ALL PROPOSED CATCH BASINS.



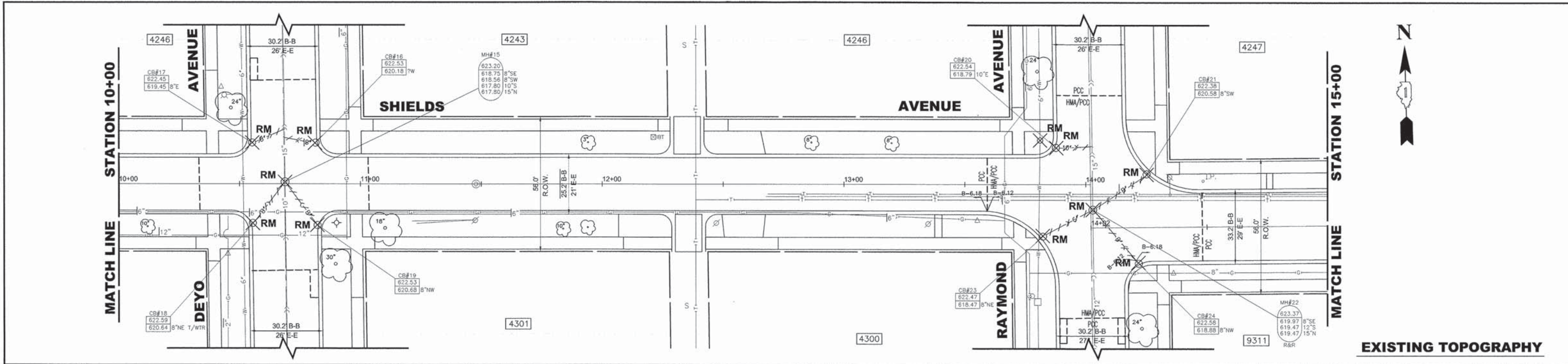
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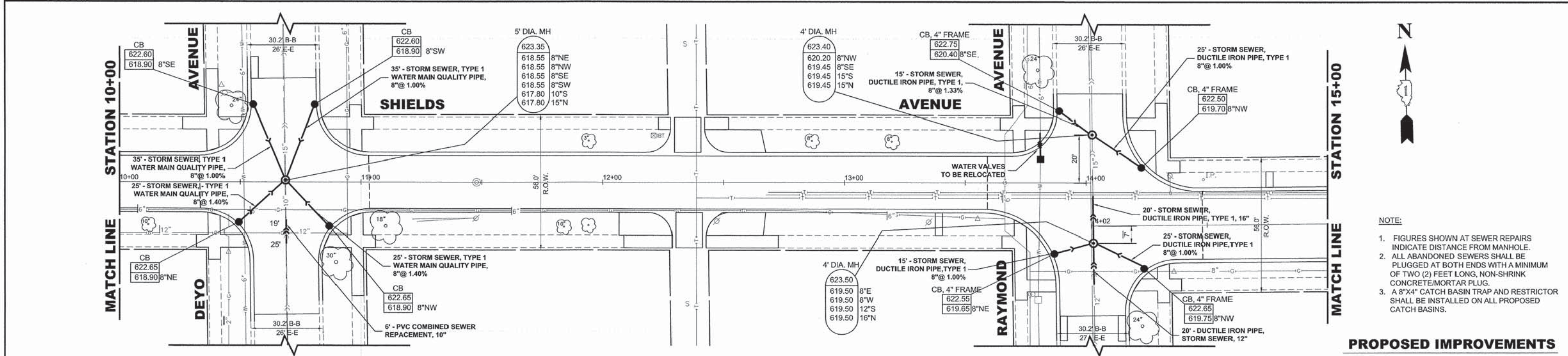
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**SHIELDS AVENUE
 UTILITIES PLAN AND PROFILE**
 SCALE: 1"=20'H, 1"=4'V. SHEET NO. 2 OF 5 SHEETS STA. 5+00 TO STA. 10+00

MS. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	20
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		
E.H.E. PROJECT NO. 125-15-02401				

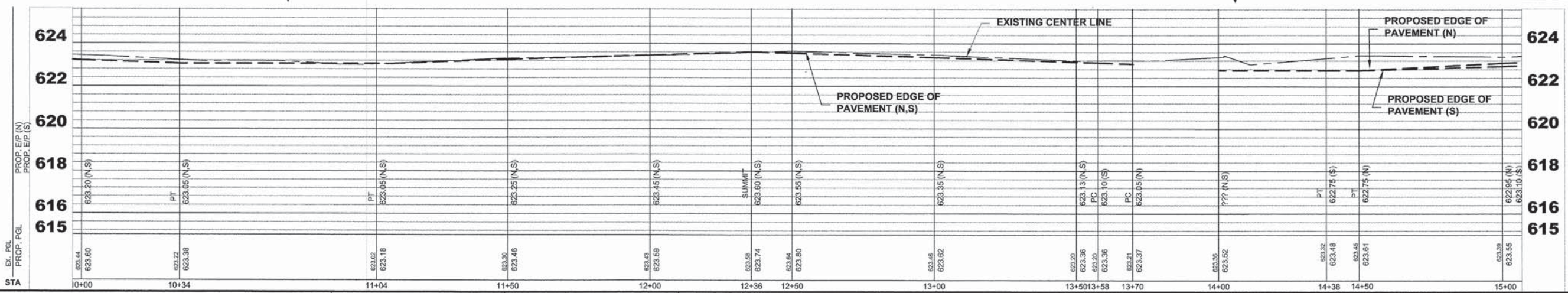


EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS

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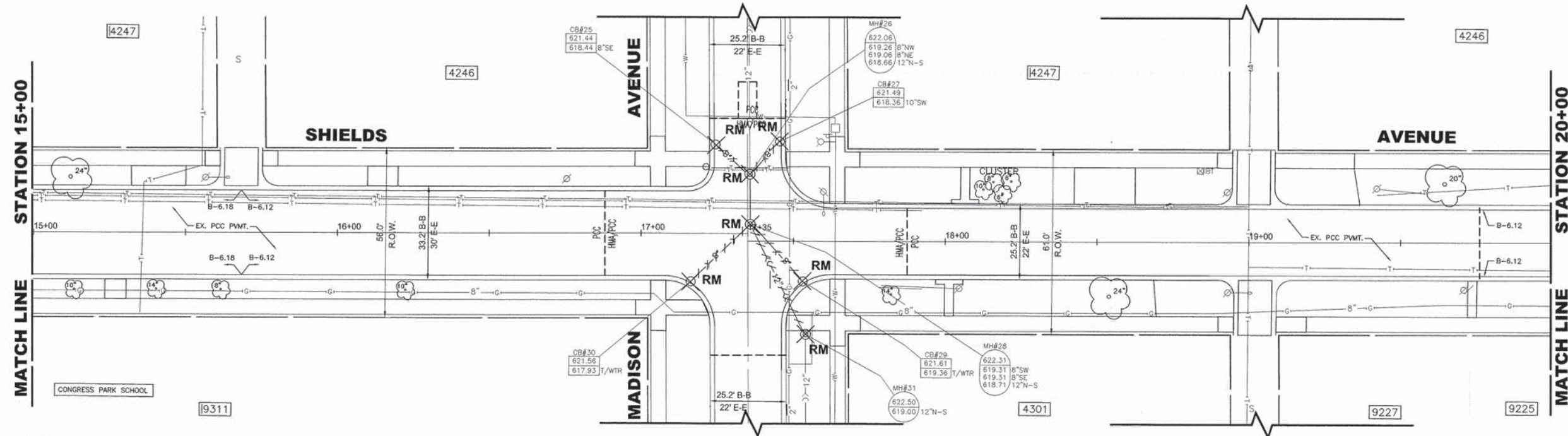
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SHIELDS AVENUE
UTILITIES PLAN AND PROFILE

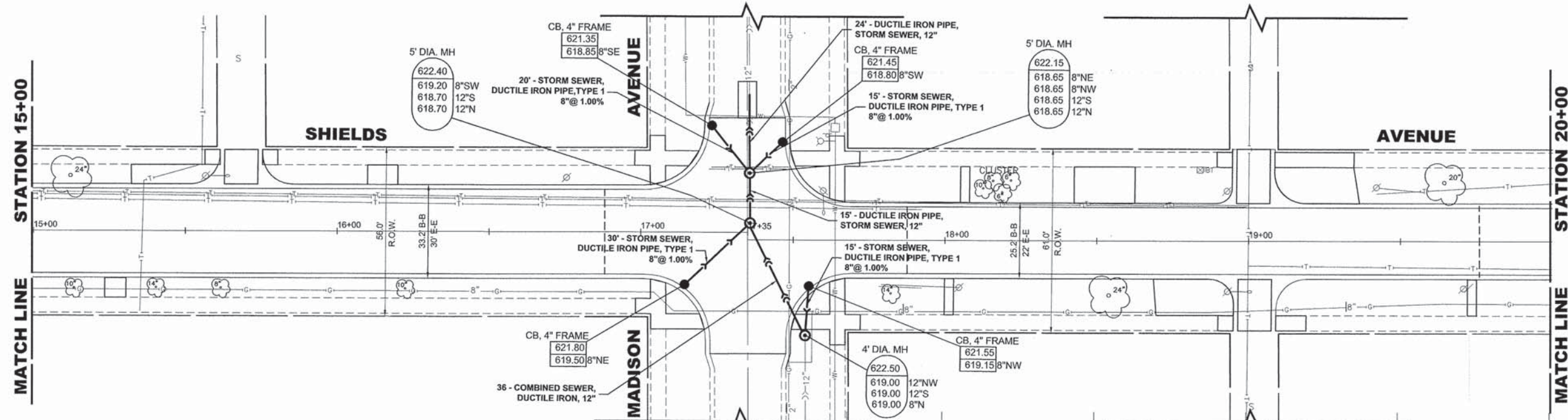
SCALE: 1"=20'H, 1"=4'V. SHEET NO. 3 OF 5 SHEETS STA. 10+00 TO STA. 15+00

MS RTE. 1365	SECTION 15-00128-00-RS	COUNTY COOK	TOTAL SHEETS 35	SHEET NO. 21
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS FED. AID PROJECT M-4003 (500)				
E.H.E. PROJECT NO. 125-15-02401				

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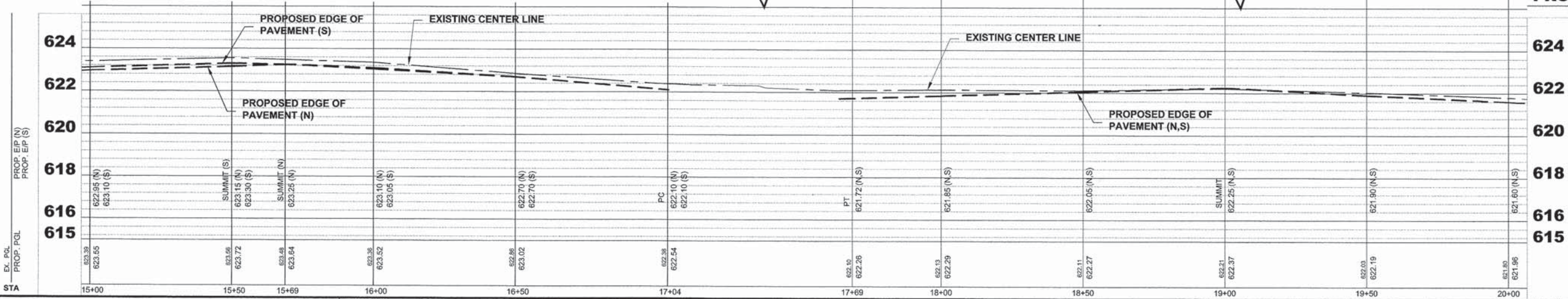
EXISTING TOPOGRAPHY



PROPOSED IMPROVEMENTS

NOTE:

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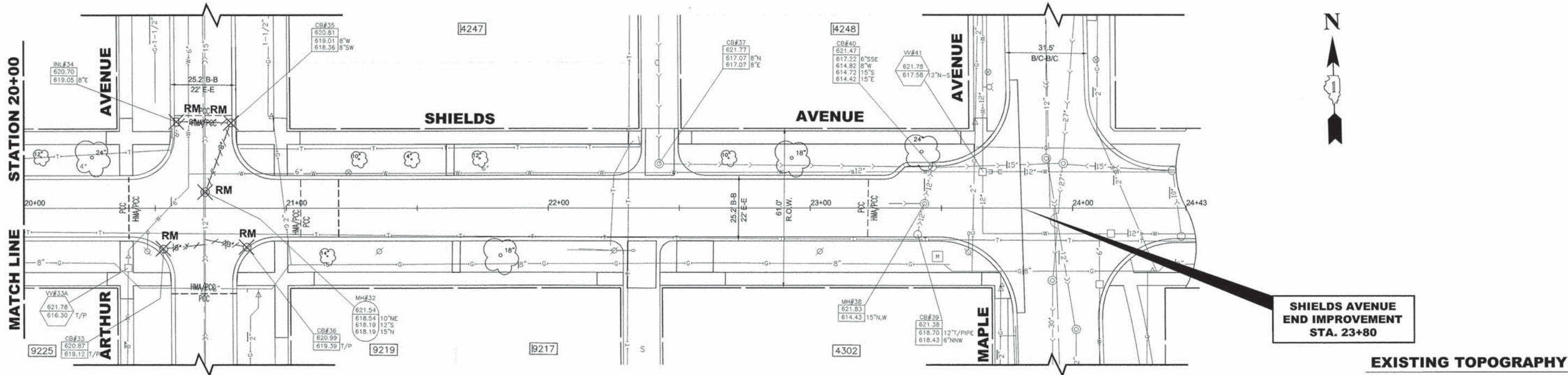
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DEPARTMENT OF TRANSPORTATION**

**SHIELDS AVENUE
UTILITIES PLAN AND PROFILE**

SCALE: 1"=20'H, 1"=4'V. SHEET NO. 4 OF 5 SHEETS STA. 15+00 TO STA. 20+00

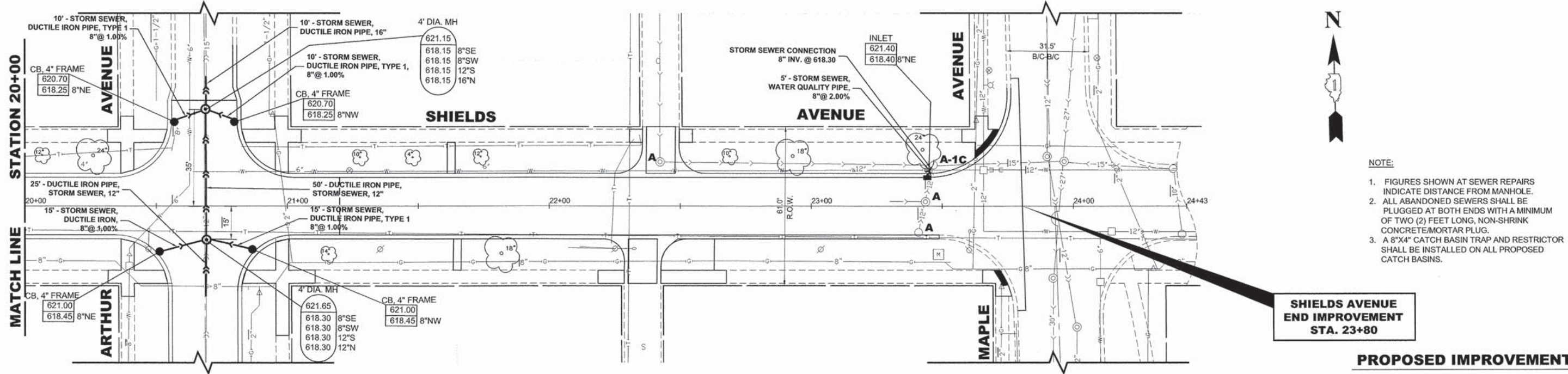
MS. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	22
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

E.H.E. PROJECT NO. 125-15-02401



**SHIELDS AVENUE
END IMPROVEMENT
STA. 23+80**

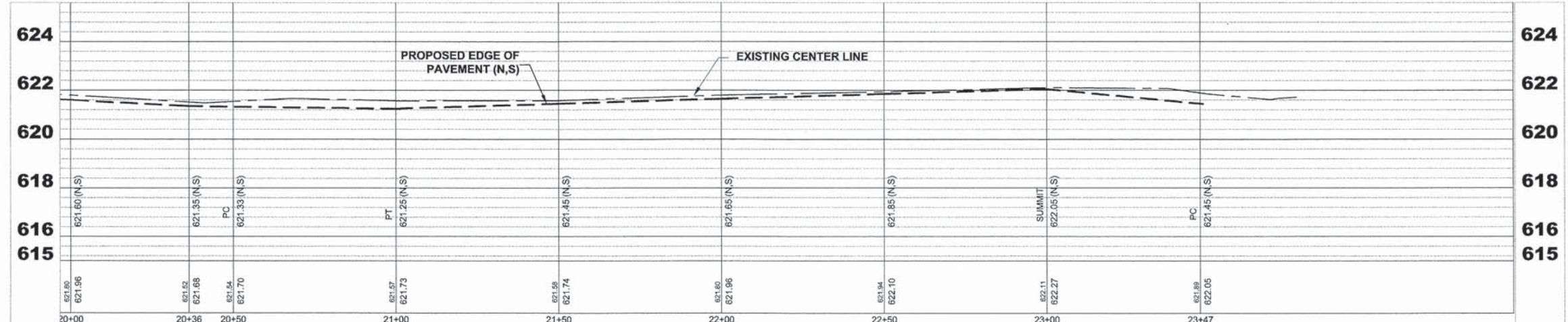
EXISTING TOPOGRAPHY



**SHIELDS AVENUE
END IMPROVEMENT
STA. 23+80**

PROPOSED IMPROVEMENTS

- NOTE:**
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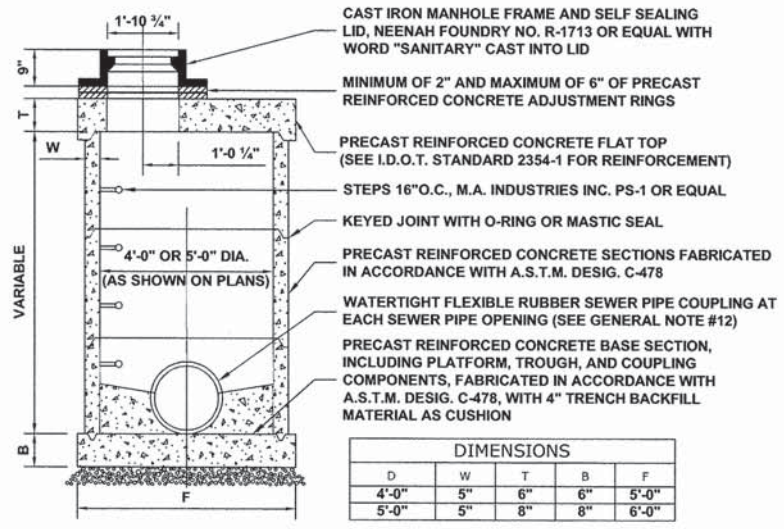
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**SHIELDS AVENUE
UTILITIES PLAN AND PROFILE**
 SCALE: 1"=20'H, 1"=4'V. SHEET NO. 5 OF 5 SHEETS STA. 20+00 TO STA. 23+80

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	23
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		
E.H.E. PROJECT NO. 125-15-02401				



CAST IRON MANHOLE FRAME AND SELF SEALING LID, NEENAH FOUNDRY NO. R-1713 OR EQUAL WITH WORD "SANITARY" CAST INTO LID

MINIMUM OF 2" AND MAXIMUM OF 6" OF PRECAST REINFORCED CONCRETE ADJUSTMENT RINGS

PRECAST REINFORCED CONCRETE FLAT TOP (SEE I.D.O.T. STANDARD 2354-1 FOR REINFORCEMENT)

STEPS 16" O.C., M.A. INDUSTRIES INC. PS-1 OR EQUAL

KEYED JOINT WITH O-RING OR MASTIC SEAL

4'-0" OR 5'-0" DIA. (AS SHOWN ON PLANS)

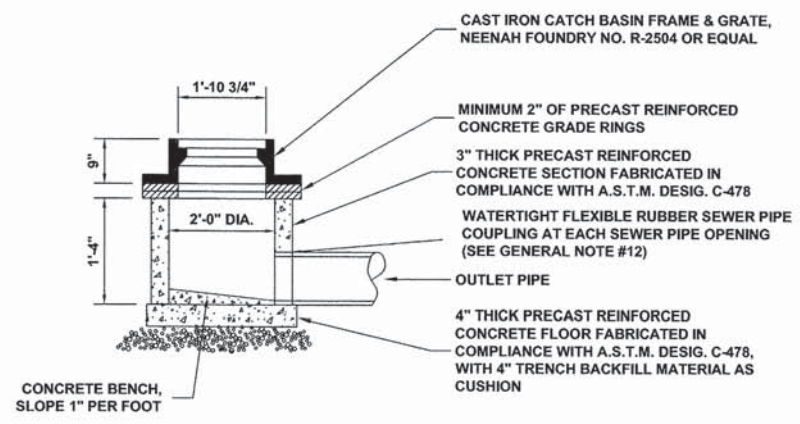
PRECAST REINFORCED CONCRETE SECTIONS FABRICATED IN ACCORDANCE WITH A.S.T.M. DESIG. C-478

WATERTIGHT FLEXIBLE RUBBER SEWER PIPE COUPLING AT EACH SEWER PIPE OPENING (SEE GENERAL NOTE #12)

PRECAST REINFORCED CONCRETE BASE SECTION, INCLUDING PLATFORM, TROUGH, AND COUPLING COMPONENTS, FABRICATED IN ACCORDANCE WITH A.S.T.M. DESIG. C-478, WITH 4" TRENCH BACKFILL MATERIAL AS CUSHION

DIMENSIONS				
D	W	T	B	F
4'-0"	5"	6"	6"	5'-0"
5'-0"	5"	8"	8"	6'-0"

**SANITARY MANHOLES, TYPE A
TYPE 1 FRAME, CLOSED LID, SPECIAL**



CAST IRON CATCH BASIN FRAME & GRATE, NEENAH FOUNDRY NO. R-2504 OR EQUAL

MINIMUM 2" OF PRECAST REINFORCED CONCRETE GRADE RINGS

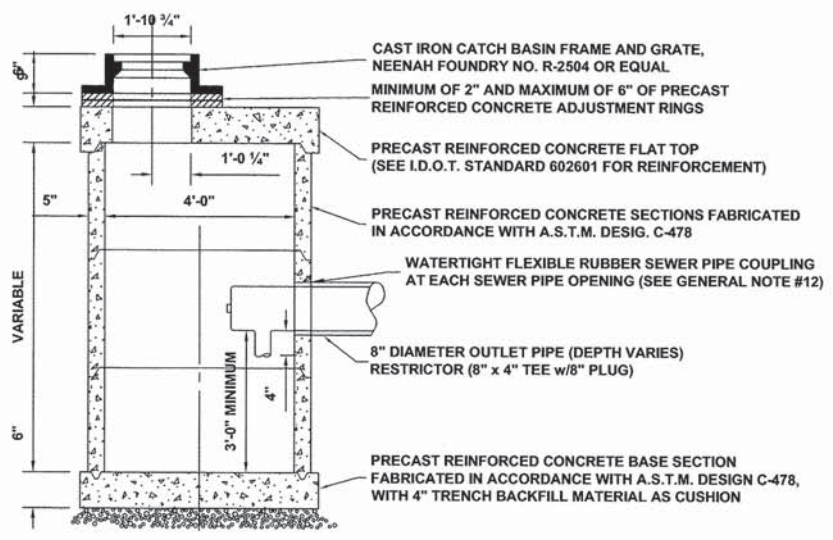
3" THICK PRECAST REINFORCED CONCRETE SECTION FABRICATED IN COMPLIANCE WITH A.S.T.M. DESIG. C-478

WATERTIGHT FLEXIBLE RUBBER SEWER PIPE COUPLING AT EACH SEWER PIPE OPENING (SEE GENERAL NOTE #12)

OUTLET PIPE

4" THICK PRECAST REINFORCED CONCRETE FLOOR FABRICATED IN COMPLIANCE WITH A.S.T.M. DESIG. C-478, WITH 4" TRENCH BACKFILL MATERIAL AS CUSHION

INLETS, WITH TYPE 1 FRAME, OPEN LID, SPECIAL



CAST IRON CATCH BASIN FRAME AND GRATE, NEENAH FOUNDRY NO. R-2504 OR EQUAL

MINIMUM OF 2" AND MAXIMUM OF 6" OF PRECAST REINFORCED CONCRETE ADJUSTMENT RINGS

PRECAST REINFORCED CONCRETE FLAT TOP (SEE I.D.O.T. STANDARD 602601 FOR REINFORCEMENT)

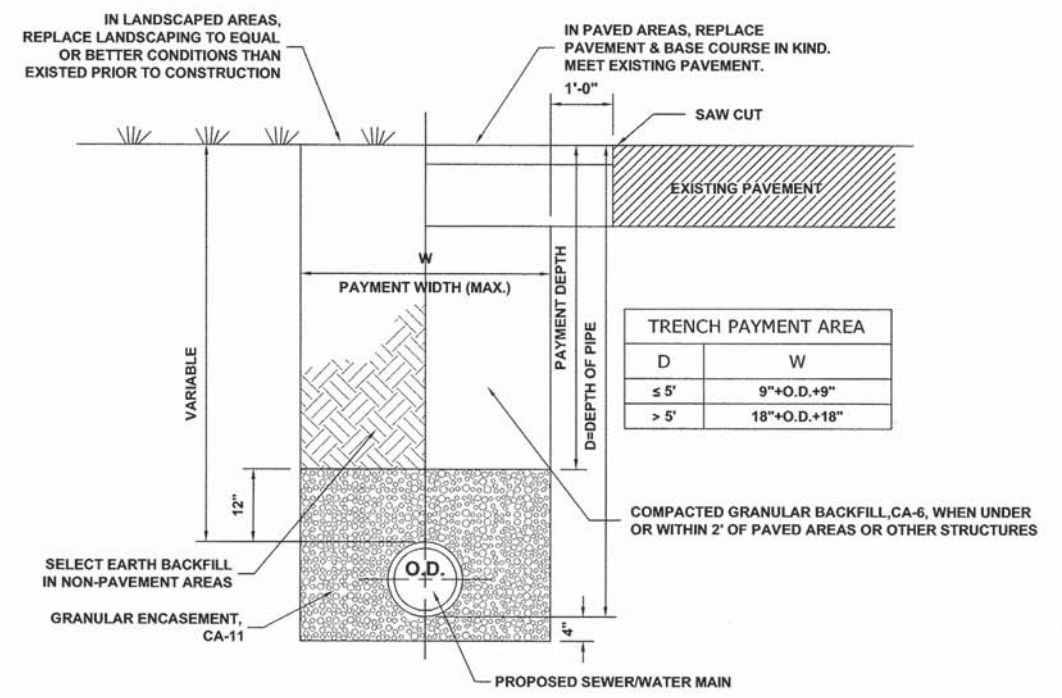
PRECAST REINFORCED CONCRETE SECTIONS FABRICATED IN ACCORDANCE WITH A.S.T.M. DESIG. C-478

WATERTIGHT FLEXIBLE RUBBER SEWER PIPE COUPLING AT EACH SEWER PIPE OPENING (SEE GENERAL NOTE #12)

8" DIAMETER OUTLET PIPE (DEPTH VARIES) RESTRICTOR (8" x 4" TEE w/8" PLUG)

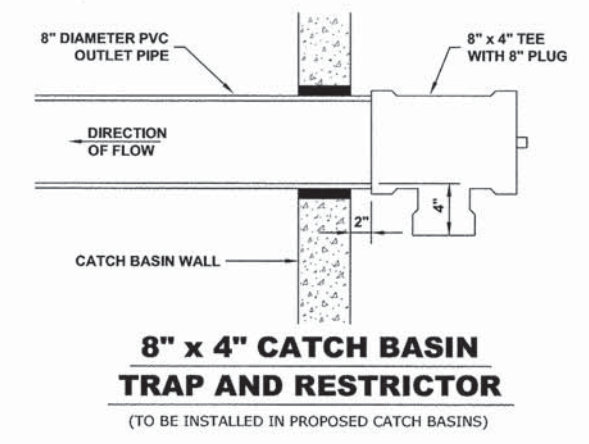
PRECAST REINFORCED CONCRETE BASE SECTION FABRICATED IN ACCORDANCE WITH A.S.T.M. DESIGN C-478, WITH 4" TRENCH BACKFILL MATERIAL AS CUSHION

**CATCH BASINS, TYPE A, 4'-DIAMETER,
TYPE 1 FRAME, SPECIAL**



TRENCH PAYMENT AREA	
D	W
≤ 5'	9"+O.D.+9"
> 5'	18"+O.D.+18"

TYPICAL SEWER AND WATER MAIN TRENCH



**8" x 4" CATCH BASIN
TRAP AND RESTRICTOR**
(TO BE INSTALLED IN PROPOSED CATCH BASINS)

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DRAINAGE AND UTILITIES DETAILS	
SCALE: NONE	SHEET NO. 1 OF 2 SHEETS STA. TO STA.

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	24
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

E.H.E. PROJECT NO. 125-15-02401

DRAINAGE AND UTILITIES NOTES

THE LOCATIONS OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, COMBINED SEWERS, TELEPHONE LINES, COMMUNICATION LINES, ELECTRIC LINES, GAS MAINS, AND WATER SERVICES ARE APPROXIMATE AND THEIR SPECIFIC LOCATIONS ARE TO BE DETERMINED IN THE FIELD AT NO COMPENSATION TO THE CONTRACTOR.

COORDINATION OF ALL UTILITY WORK INVOLVED WITHIN THE CONSTRUCTION AREAS SHALL BE SUBJECT TO DISCUSSION AND CLARIFICATION AT A PRECONSTRUCTION MEETING.

WHEN EXISTING DRAINAGE FACILITIES ARE DISTURBED, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY OUTLETS AND CONNECTIONS FOR ALL PRIVATE OR PUBLIC DRAINAGE STRUCTURES OR SEWERS UNTIL PERMANENT CONNECTIONS TO SEWERS ARE BUILT AND IN SERVICE. THIS WORK SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

WHEN, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIALS ARE DEPOSITED IN THE FLOW LINES OF GUTTERS OR DRAINAGE STRUCTURES SO THAT THE NATURAL FLOW OF WATER IS OBSTRUCTED, THE OBSTRUCTING MATERIALS SHALL BE REMOVED AT THE CLOSE OF EACH WORK DAY. AT THE CONCLUSION OF THE CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES ARE TO BE FREE OF ALL DIRT, DEBRIS, AND OBSTRUCTING MATERIALS. THE WORK SPECIFIED ABOVE WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

ALL COSTS INVOLVED IN CONNECTING OF PROPOSED STORM SEWERS AND STORM STRUCTURES TO EXISTING STORM SEWERS OR PROPOSED STORM SEWERS SHALL BE INCLUDED IN THE PROPOSED ITEMS BEING CONSTRUCTED.

ALL PROPOSED WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH IN THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", FIFTH EDITION, DATED 1996, AND ALL REVISIONS THERETO.

THE CONTRACTOR SHALL VERIFY THE TYPE OF ALL WATER MAIN HARDWARE INCLUDING VALVES, FIRE HYDRANTS, VALVE BOXES, CORPORATION STOPS, CURB STOPS, AND WATER SERVICES BOXES WITH THE UTILITY SUPERINTENDENT PRIOR TO ORDERING SUCH MATERIAL.

THE TYPE OF FRAMES AND GRATES REQUIRED FOR ALL CATCH BASINS AND MANHOLES LISTED IN THE SUMMARY OF QUANTITIES MAY BE FOUND ON THE PLANS AT THEIR RESPECTIVE LOCATIONS. WHERE LIDS ARE CALLED FOR ON THE PLANS, THEY SHALL BE IN ACCORDANCE WITH ARTICLE 604.01 OF THE STANDARD SPECIFICATIONS AND THE TERM LID IS USED IN LIEU OF GRATE.

ON ALL IMPROVEMENTS, THE FRAMES AND LIDS OF EXISTING CATCH BASINS, INLETS, MANHOLES, AND VALVE VAULTS WHICH ARE TO BE ABANDONED DUE TO CONSTRUCTION OF THIS IMPROVEMENT ARE TO REMAIN THE PROPERTY OF THE VILLAGE OF BROOKFIELD AND BE SALVAGED. THE CONTRACTOR IS TO DELIVER FRAMES AND LIDS TO THE VILLAGE OF BROOKFIELD PUBLIC WORKS YARD LOCATED AT 4545 EBERLY AVENUE.

ANY COSTS FOR SHEETING OR SHORING REQUIRED FOR THE STORM SEWER INSTALLATION OR OTHER CONSTRUCTION ELEMENTS REQUIRING RELATIVELY DEEP EXCAVATIONS SHALL BE INCLUDED IN THE PARTICULAR PAYMENT ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR ANY SUPPLEMENTAL WORK ASSOCIATED WITH THE MAINTENANCE OF TRENCH SIDES OR OTHER EXCAVATED AREAS.

UNLESS OTHERWISE SPECIFIED, ABANDONED SEWERS AND DRAINS, AS DESIGNATED BY THE ENGINEER, SHALL BE PLUGGED AT BOTH ENDS WITH A MINIMUM OF TWO (2) FOOT LONG, NON-SHRINK CONCRETE/MORTAR PLUG. THIS WORK SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE PAY ITEMS FOR REMOVING AND/OR FILLING THE VARIOUS TYPES OF STRUCTURES.

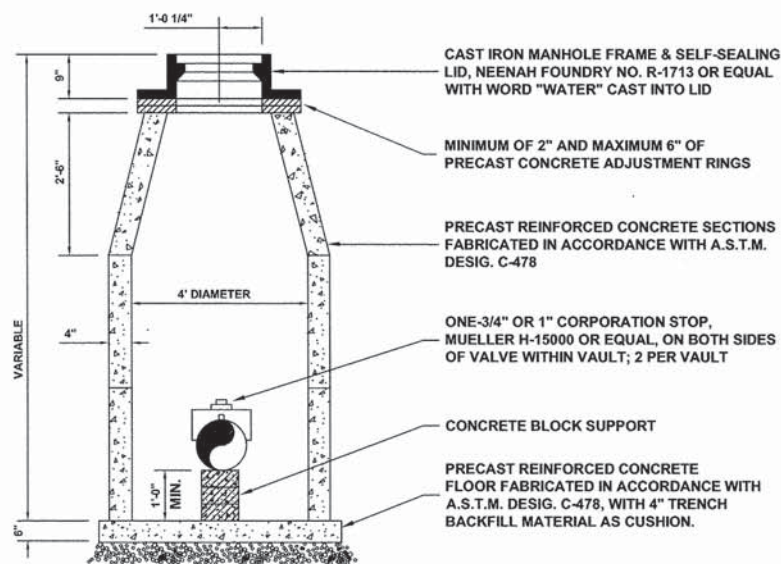
SEWER PIPE INSTALLED ON THIS PROJECT SHALL CONFORM TO THE FOLLOWING STANDARD:

TYPE OF PIPE	MATERIAL STANDARD	JOINT STANDARD
POLYVINYLCHLORIDE PIPE (6"-12")	ASTM D-2241	ASTM D-3139
POLYVINYLCHLORIDE PIPE (15")	ASTM D-3034	ASTM D-3212
DUCTILE IRON PIPE	CLASS 52 ANSI-A 21.51	ANSI/AWWA C111/A21.11

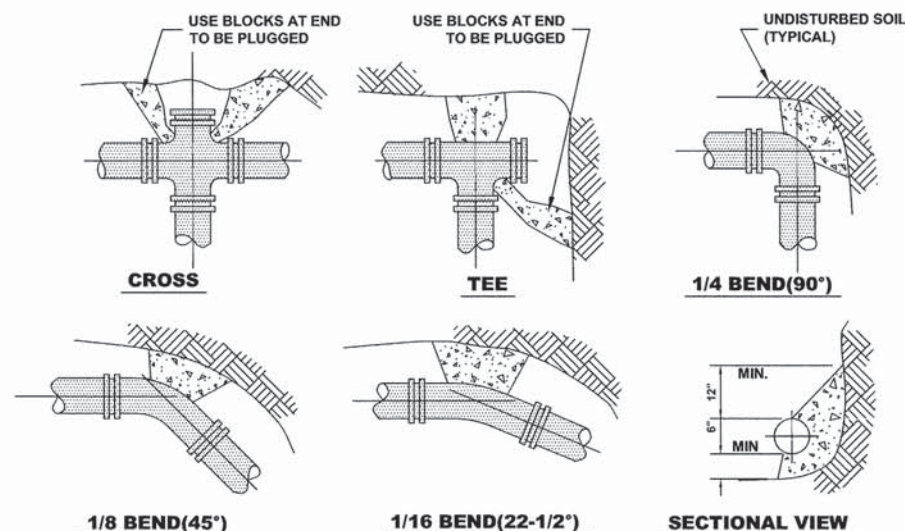
FINAL ADJUSTMENT OF ALL STRUCTURES IN THE PAVEMENT, INCLUDING THOSE IN THE PROPOSED BASE COURSE, SHALL NOT BE COMPLETED UNTIL AFTER THE PLACEMENT OF THE LEVELING BINDER.

DUCTILE IRON PIPE SPECIFICATIONS

- ALL DUCTILE IRON PIPE WATER MAINS AND SEWER MAINS SHALL BE CLASS 52, CEMENT-LINED AND TAR-COATED, MEETING THE REQUIREMENTS OF SPECIFICATIONS ANSI/AWWA C151/A21.51 WITH "PUSH-ON" JOINTS MEETING THE REQUIREMENTS OF SPECIFICATIONS ANSI/AWWA C111/A21.11. WHERE SPECIFIED ON THE PLANS, OR IN THE SPECIFICATIONS, MECHANICAL JOINTS AND "LOCK-TYPE" JOINTS SHALL BE USED IN LIEU OF "PUSH-ON" JOINTS.
- ALL PIPE FITTINGS AND SPECIAL CASTINGS SHALL BE DUCTILE IRON CONFORMING TO ANSI/AWWA C153/A21.53 AND ANSI/AWWA C111/A21.11 SPECIFICATIONS AND SHALL MEET THE MINIMUM REQUIREMENTS OF CLASS 150 DUCTILE IRON PIPE. IF CERTAIN FITTINGS ARE NOT MANUFACTURED IN DUCTILE IRON, CAST IRON FITTINGS SHALL BE ACCEPTABLE. MECHANICAL JOINT TYPE FITTINGS SHALL BE USED.
- ALL PROPOSED DUCTILE IRON PIPE WATER MAIN AND SEWER MAIN WILL BE ENCASED WITHIN FOUR (4) MIL THICK, HIGH-DENSITY POLYETHYLENE TUBING. ALL FITTINGS SHALL BE ENCASED IN A DOUBLE-LAYER OF POLYETHYLENE TUBING. THE POLYETHYLENE MATERIAL SHALL BE MANUFACTURED AND INSTALLED IN COMPLIANCE WITH ANSI/AWWA C105/A21.5. ALL PROPOSED WATER AND SEWER SERVICES SHALL BE ENCASED IN POLYETHYLENE TUBING FOR A MINIMUM DISTANCE OF THREE FEET (3') FROM THE PROPOSED WATER MAIN AND SEWER MAIN.

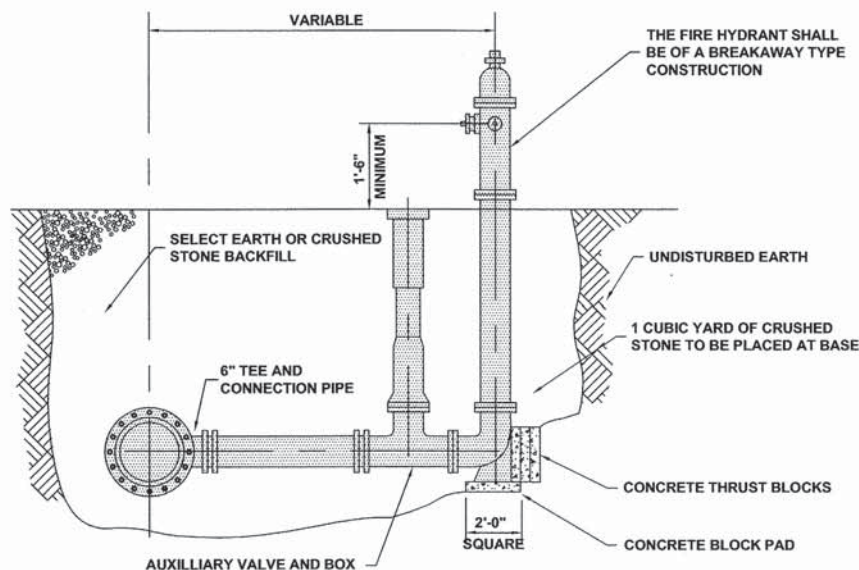


**VALVE VAULTS, TYPE A, 4' DIAMETER
TYPE 1 FRAME, CLOSED LID**



- NOTE:**
- THRUST BLOCKS TO BE USED AT 1/16(22-1/2°) OR GREATER BENDS & AT ALL ENDS TO BE PLUGGED.
 - PRECAST CONCRETE THRUST BLOCKS TO BE PLACED AGAINST FIRM, UNDISTURBED SOIL.

THRUST BLOCK DETAIL



FIRE HYDRANT DETAIL

Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\24-26_Drainage-Details.dwg Oct 13, 2015 - 10:11am

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DESIGNED -	JCG	REVISED -	
DRAWN -	MK, DMM	REVISED -	
CHECKED -	DST	REVISED -	
DATE -	10-12-15	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

DRAINAGE AND UTILITIES DETAILS

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

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	25
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

E.H.E. PROJECT NO. 125-15-02401

M.W.R.D.G.C. GENERAL NOTES

A. REFERENCED SPECIFICATIONS

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
 - STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
 - STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
 - VILLAGE OF BROOKFIELD MUNICIPAL CODE;
 - THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
 - IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

- MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).
- THE VILLAGE OF BROOKFIELD ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

- ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS ____ FT.
- MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
- THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.
- THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.
- THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.
- ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
- MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
- THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
- ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.
- RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

- THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
- A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.
- DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.
- ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
- ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
- ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
- ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONC SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE		
6-INCH TO 15-INCH DIAMETERSDR 26	ASTM D-3034	ASTM D-3212
18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM F-679	ASTM D-3212
HIGH DENSITY POLYETHYLENE		
	ASTM D-3350	ASTM D-3261.F-2620 (HEAT FUSION)
	ASTM D-3035	ASTM D-3212.F-477 (GASKETED)
WATER MAIN QUALITY PVC		
4-INCH TO 36-INCH D-3139	ASTM D-2241	ASTM D-2672 OR ASTM
4-INCH TO 12-INCH	AWWA C900	ASTM D-3212
14-INCH TO 48-INCH	AWWA C905	ASTM D-3212

- ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE 1/4 " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
- "BAND SEAL" OR SIMILAR NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR MATERIALS.
- BELOW THE FLOOD PROTECTION ELEVATION (FPE = BFE + 2 FEET), ALL SANITARY SEWER MANHOLES AND STRUCTURES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.
- WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
 - A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE SADDLE OR HUB-TEE SADDLE.
 - REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION.
 - WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE.
- WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMANS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED ABOVE CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATERMAIN, THE SEWER SHALL BE CONSTRUCTED TO WATERMAIN STANDARDS.
- ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
- ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
- ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.
- ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
- EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TIES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.
- A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

- THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.
- ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
 - UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
 - ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.
- TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.
- DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.
- ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
- VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
- SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.
- EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.
- STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
- THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMANS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.
- ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
- THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

Drawing File: W:\Projects_by_Village\Brookfield\22518024 - Shields Ave Improvements\24-26_Drainage-Details.dwg Oct 13, 2015 - 10:11am 10+ Years of Experience



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















DESIGNED - JCG	REVISED -
DRAWN - MK, DMM	REVISED -
CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

M.W.E.D.G.C. GENERAL NOTES	
SCALE: NONE	SHEET NO. 3 OF 3 SHEETS STA. TO STA.

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	26
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		

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JOB-SITE SIGNING CODES AND SIZES			JOB-SITE SIGNING CODES AND SIZES		
SYMBOL	SIGN	CODE & SIZE	SYMBOL	SIGN	CODE & SIZE
		R1-1 30"x30"			
		R1-4 18"x6"			
		R2-1 24"x30"			
		R2-1 24"x30"			
		S1-1 36"x36"			
		S4-1103 24"x12"			
		S4-3P (FYG) 24"x8"			
		S5-2 24"x30"			
		W16-9P (FYG) 24"x12"			



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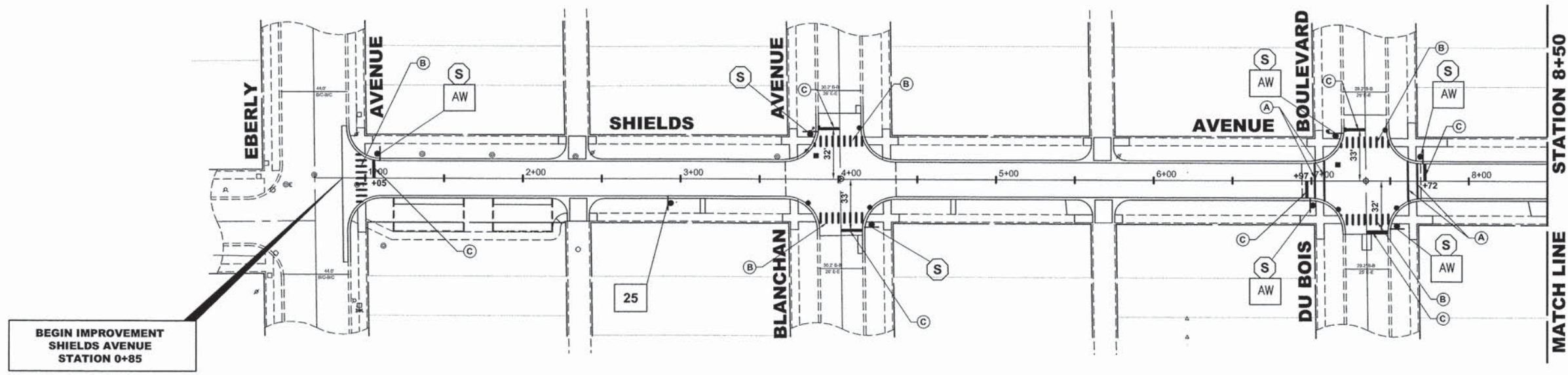
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DRAWN -	MK, DMM	REVISED -	
CHECKED -	DST	REVISED -	
DATE -	10-12-15	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNING LEGEND AND NOTES

SCALE: NTS SHEET NO. 1 OF 1 SHEETS STA. - TO STA. -

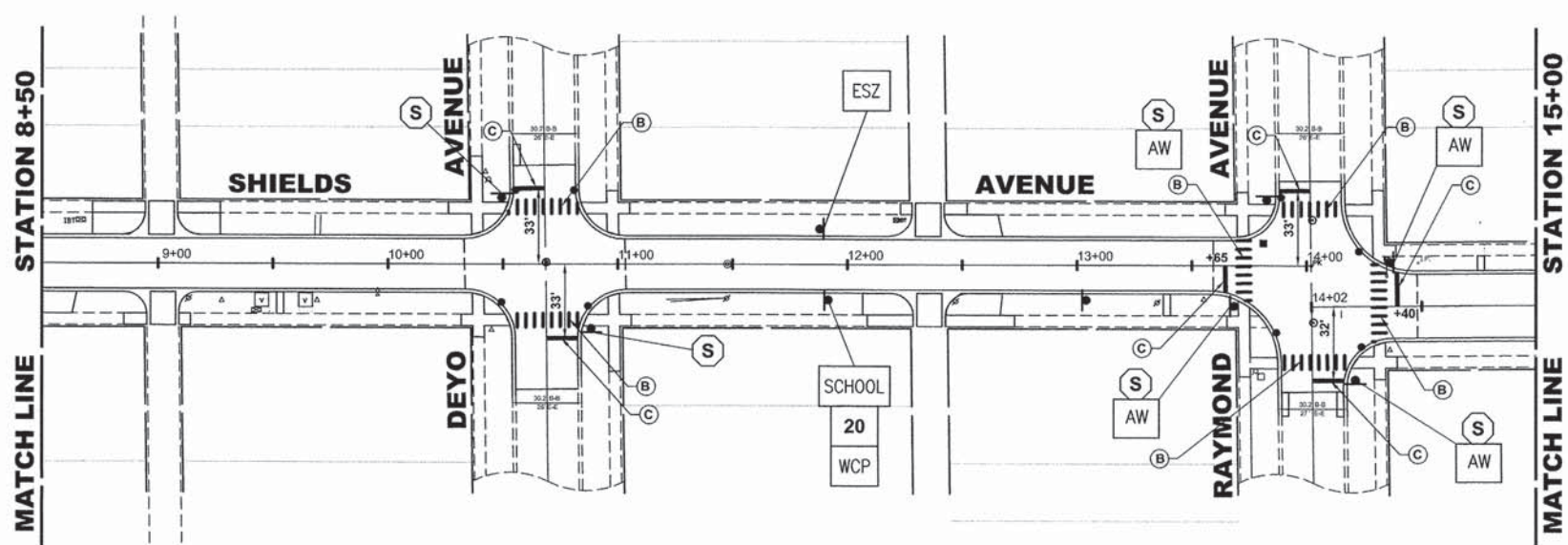
MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	27
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		



NOTE:

1. STREET NAME SIGNS AND VILLAGE MISCELLANEOUS (SPECIALTY) SIGNS ALONG WITH THEIR POSTS ARE TO BE REMOVED BY THE THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE SIGNS AND POSTS ARE TO BE DELIVERED BY THE CONTRACTOR TO THE VILLAGE OF BROOKFIELD PUBLIC WORKS FACILITY LOCATED AT 4545 EBERLY AVENUE. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE COST OF THE CONTRACT.
2. ALL POSTS TO BE TELESCOPING STEEL SIGN SUPPORT.
3. CONTRACTOR TO VERIFY LOCATIONS OF ALL SIGNAGE.

ITEM DESCRIPTION	SYMBOL
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	(A)
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	(B)
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	(C)



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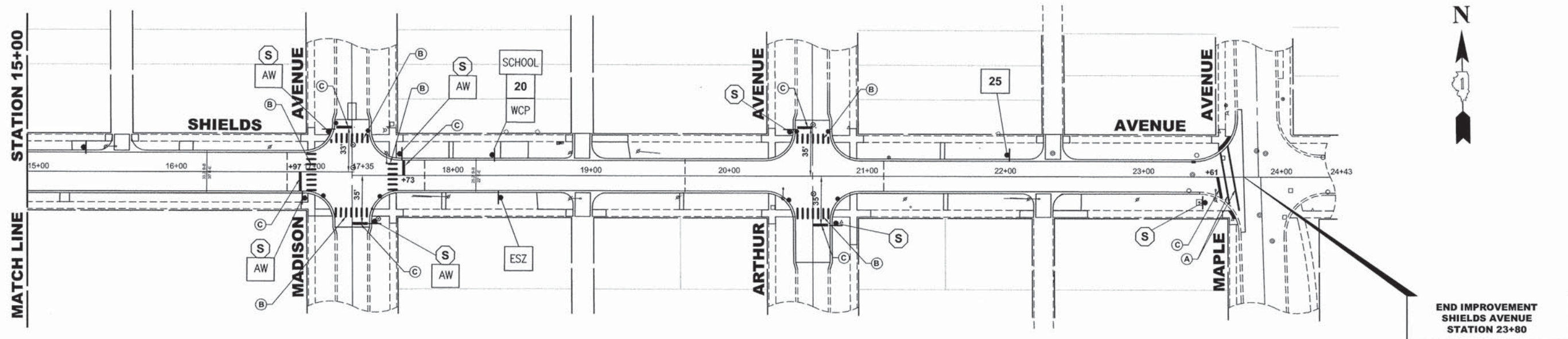
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DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING AND SIGNING PLAN
 SCALE: 1" = 40'
 SHEET NO. 1 OF 2 SHEETS
 STA. 0+00 TO STA. 15+00

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	28
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS FED. AID PROJECT M-4003 (500)				



NOTE:

1. STREET NAME SIGNS AND VILLAGE MISCELLANEOUS (SPECIALTY) SIGNS ALONG WITH THEIR POSTS ARE TO BE REMOVED BY THE THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE SIGNS AND POSTS ARE TO BE DELIVERED BY THE CONTRACTOR TO THE VILLAGE OF BROOKFIELD PUBLIC WORKS FACILITY LOCATED AT 4545 EBERLY AVENUE. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE COST OF THE CONTRACT.
2. ALL POSTS TO BE TELESCOPING STEEL SIGN SUPPORT.
3. CONTRACTOR TO VERIFY LOCATIONS OF ALL SIGNAGE.

ITEM DESCRIPTION	SYMBOL
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	(A)
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	(B)
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	(C)

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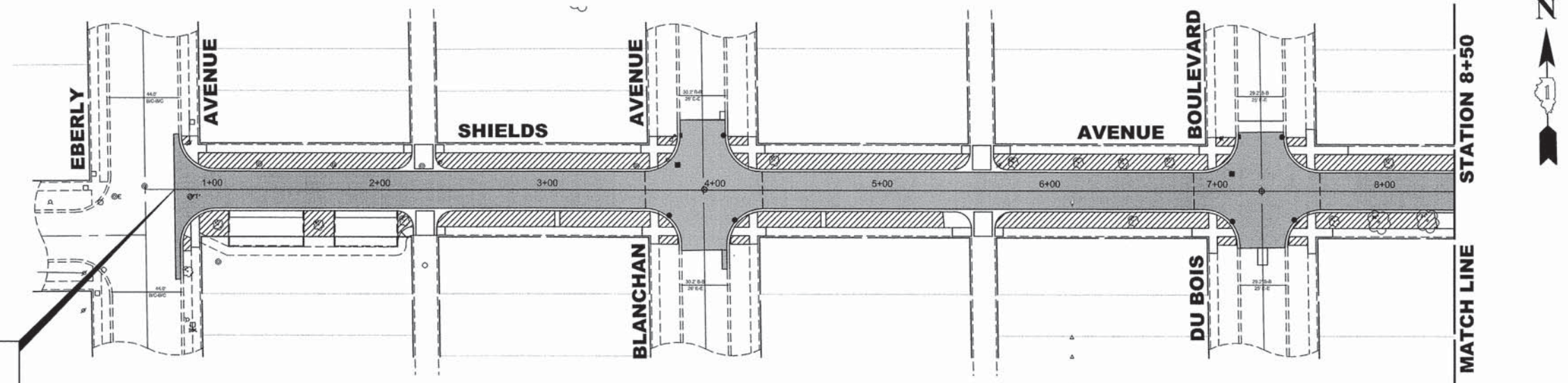
DESIGNED -	JCG	REVISED -	
DRAWN -	MK, DMM	REVISED -	
CHECKED -	DST	REVISED -	
DATE -	10-12-15	REVISED -	

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING AND SIGNING PLAN

SCALE: 1" = 40' SHEET NO. 2 OF 2 SHEETS STA. 15+00 TO STA. 23+80

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	29
FIELD BOOK NO. : 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT M-4003 (500)		
E.H.E. PROJECT NO. 125-15-02401				



LANDSCAPING NOTES

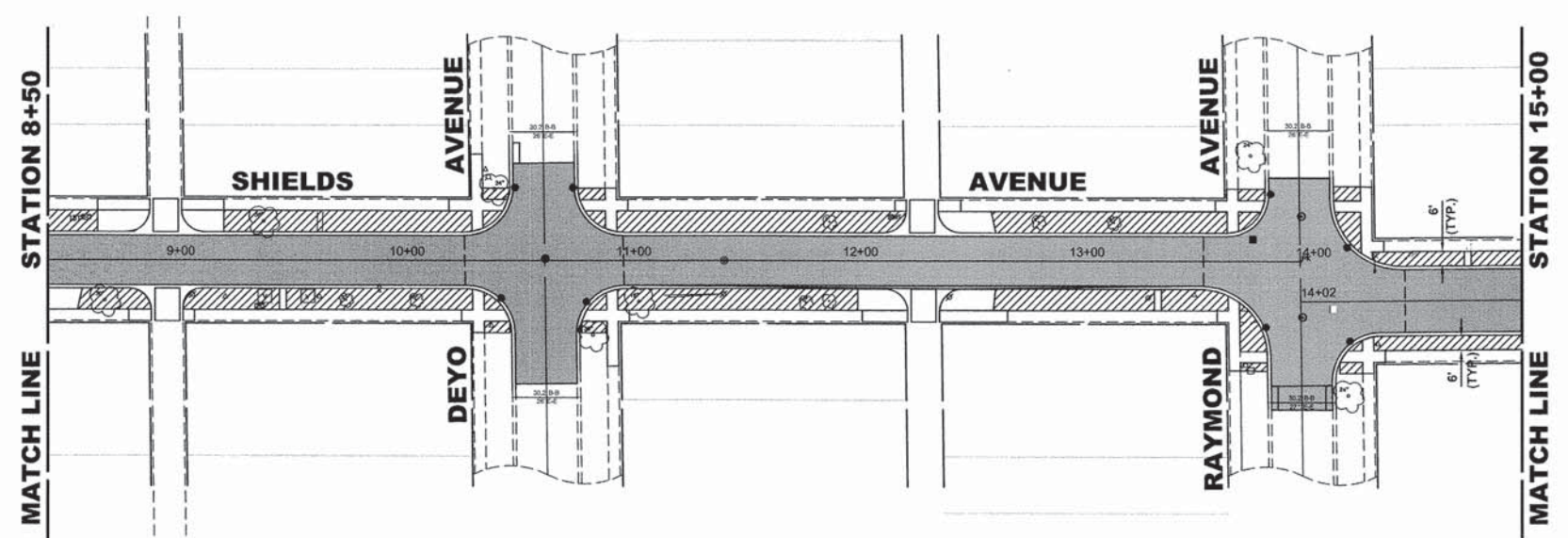
SODDING:
 ALL DISTURBED AREAS INDICATED ON CROSS SECTION OR LANDSCAPING PLANS TO BE SODDED, INCLUDING FERTILIZER NUTRIENTS*, AND SUPPLEMENTAL WATERING WHICH IS TO BE USED AFTER THE INITIAL WATERING (AS SPECIFIED AND AS DIRECTED BY THE ENGINEER) AT THE RATE OF 10 GALLONS PER SQUARE YARD SODDING. SODDED SLOPES WHICH ARE 2:1 OR STEEPER SHALL BE STAKED. (PROVIDE A 3" STRIP AROUND CATCH BASINS IN SEEDED AREAS).

FERTILIZER NUTRIENTS* FOR SODDING:
 USE A FERTILIZER WITH A 1:1:1 RATIO PER ACRE:
 60 LBS. NITROGEN FERTILIZER NUTRIENT
 60 LBS. PHOSPHORUS FERTILIZER NUTRIENT
 60 LBS POTASSIUM FERTILIZER NUTRIENT
TOTAL: 180 LBS. PER ACRE

4" TOP SOIL LAYER:
 SOIL SHALL BE SPREAD AS INDICATED ON THE TYPICAL CROSS SECTIONS.
 MINIMAL GRADING TO BE PERMITTED WITHIN AN APPROXIMATE RADIUS OF 6' FROM ALL TREES TO BE SAVED AS DETERMINED BY THE ENGINEER.
 CONTRACTOR SHALL PROVIDE SPADE EDGE FOR ALL SODDING AREAS ABUTTING EXISTING TREES BY MAINTAINING A MINIMUM 5' DIAMETER MULCH RING AROUND EXISTING TREES.

LEGEND OF SYMBOLS

SYMBOL	DESCRIPTION
[White Box]	PROPOSED CONCRETE AREA
[Hatched Box]	PROPOSED SODDED PARKWAY
[Grey Box]	PROPOSED HOT-MIX ASPHALT AREA



Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\SITE\Shields_Ave_40pcalls.dwg Oct 16, 2015 - 10:22am

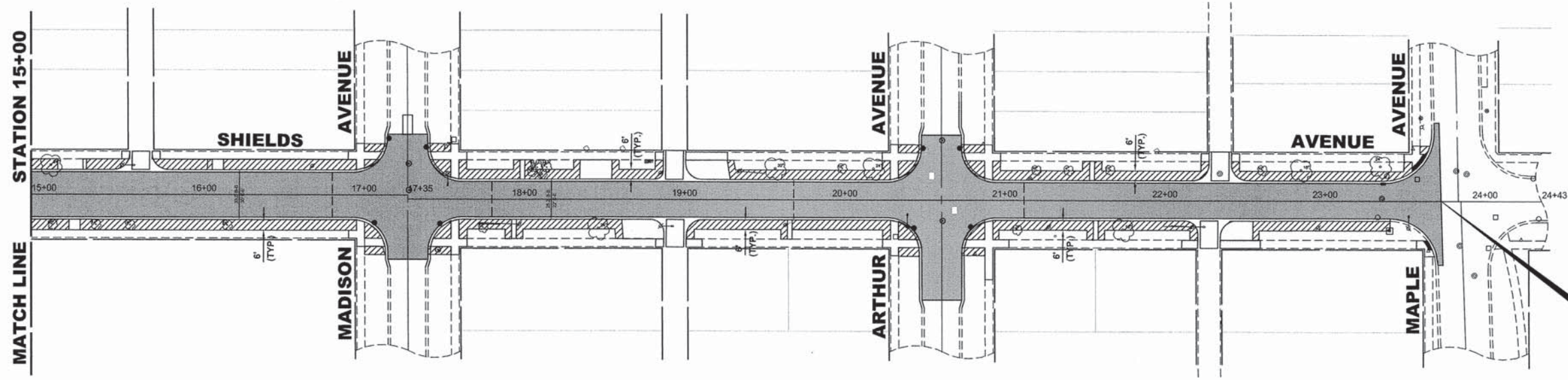
HANCOCK ENGINEERING
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 Civil Engineers
 Municipal Consultants
 Established 1911
 9933 Roosevelt Road
 Westchester, IL 60154-2780
 Phone: 708-645-0300
 www.hancock.com

DESIGNED - JCG	REVISED -
DRAWN - MK, DMM	REVISED -
CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ASPHALT AND LANDSCAPING PLAN
 SCALE: 1" = 40'
 SHEET NO. 1 OF 2 SHEETS
 STA. 0+85 TO STA. 15+00

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	30
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS FED. AID PROJECT M-4003 (500)				
E.H.E. PROJECT NO. 125-15-02401				



LANDSCAPING NOTES

SODDING:

ALL DISTURBED AREAS INDICATED ON CROSS SECTION OR LANDSCAPING PLANS TO BE SODDED, INCLUDING FERTILIZER NUTRIENTS*, AND SUPPLEMENTAL WATERING WHICH IS TO BE USED AFTER THE INITIAL WATERING (AS SPECIFIED AND AS DIRECTED BY THE ENGINEER) AT THE RATE OF 10 GALLONS PER SQUARE YARD SODDING. SODDED SLOPES WHICH ARE 2:1 OR STEEPER SHALL BE STAKED. (PROVIDE A 3" STRIP AROUND CATCH BASINS IN SEEDED AREAS).

FERTILIZER NUTRIENTS* FOR SODDING:

USE A FERTILIZER WITH A 1:1:1 RATIO PER ACRE:

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

TOTAL: 180 LBS. PER ACRE

4" TOP SOIL LAYER:

SOIL SHALL BE SPREAD AS INDICATED ON THE TYPICAL CROSS SECTIONS.
 MINIMAL GRADING TO BE PERMITTED WITHIN AN APPROXIMATE RADIUS OF 6' FROM ALL TREES TO BE SAVED AS DETERMINED BY THE ENGINEER.
 CONTRACTOR SHALL PROVIDE SPADE EDGE FOR ALL SODDING AREAS ABUTTING EXISTING TREES BY MAINTAINING A MINIMUM 5' DIAMETER MULCH RING AROUND EXISTING TREES.

LEGEND OF SYMBOLS

SYMBOL	DESCRIPTION
	PROPOSED CONCRETE AREA
	PROPOSED SODDED PARKWAY
	PROPOSED HOT-MIX ASPHALT AREA

Drawing file: W:\Projects_by_Milaga\Brookfield\12515024 - Shields Ave Improvements\SITE\Shields_Ave_40Scale.dwg Oct 16, 2015 - 10:21am



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 ♦ Established 1911

9933 Roosevelt Road
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 Phone: 708-665-0300
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DESIGNED - JCG	REVISED -
DRAWN - MK, DMM	REVISED -
CHECKED - DST	REVISED -
DATE - 10-12-15	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

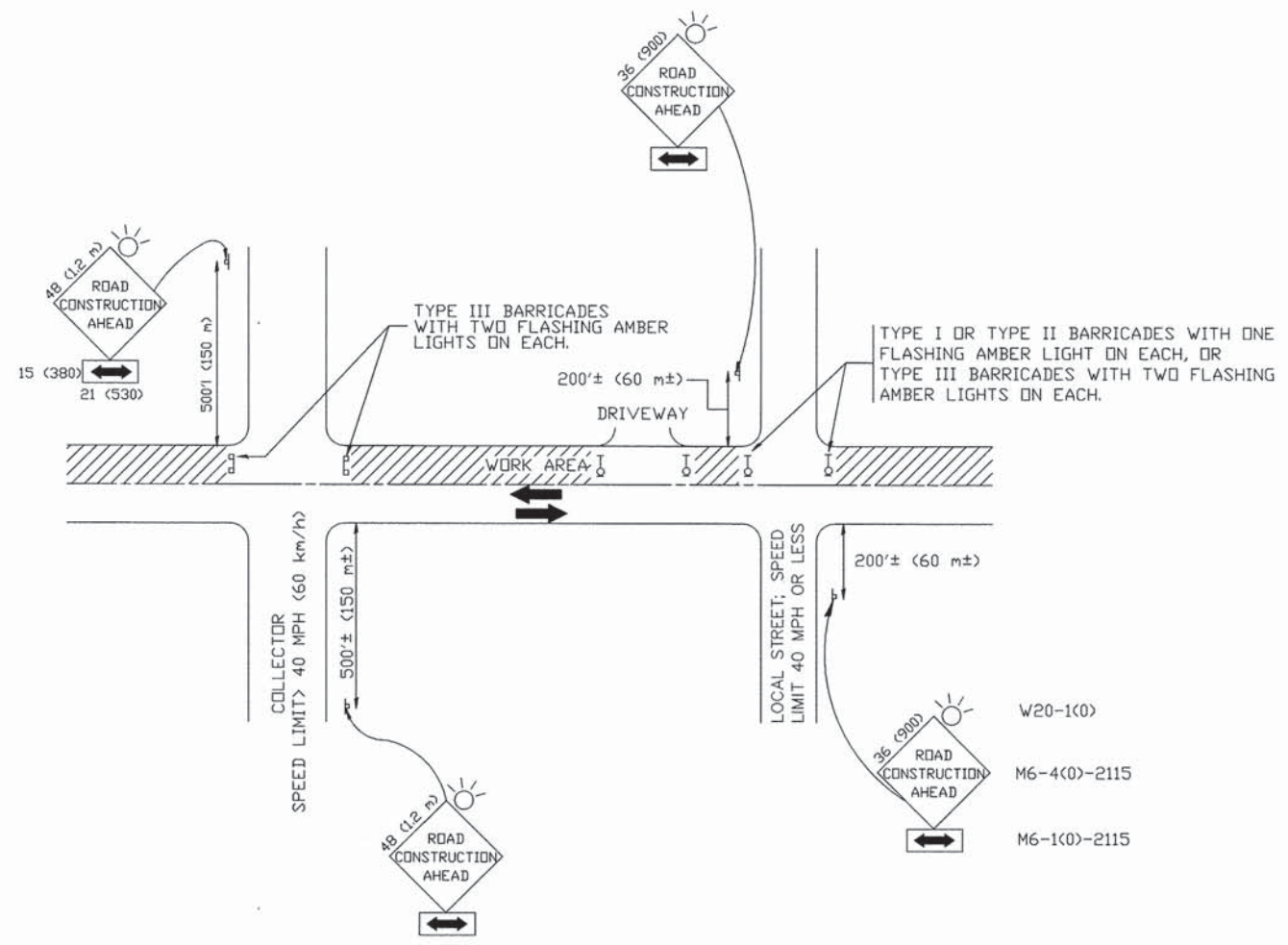
ASPHALT AND LANDSCAPING PLAN

SCALE: 1" = 40' SHEET NO. 2 OF 2 SHEETS STA. 15+00 TO STA. 23+80

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	31
FIELD BOOK NO.: 1569		CONTRACT NO. 61C14		
ILLINOIS		FED. AID PROJECT	M-4003 (500)	

E.H.E. PROJECT NO. 125-15-02401

Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\32-TC-10.dwg Oct. 13, 2015 - 10:15am



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

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 - 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
 - USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

USER NAME =	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
PLOT SCALE =	DRAWN -	REVISED - A. HOUSEH 03-06-96
PLOT DATE =	CHECKED -	REVISED - A. HOUSEH 10-15-96
	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

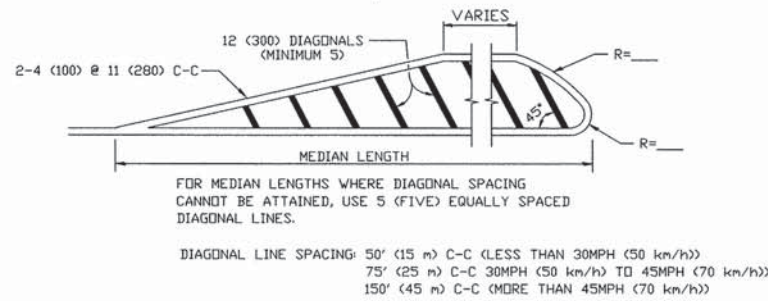
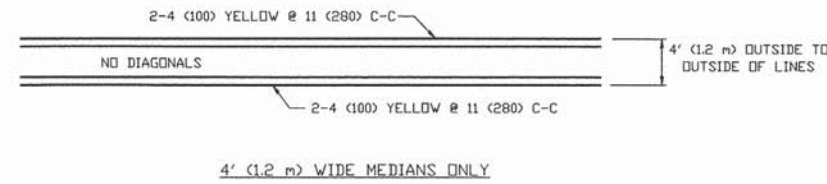
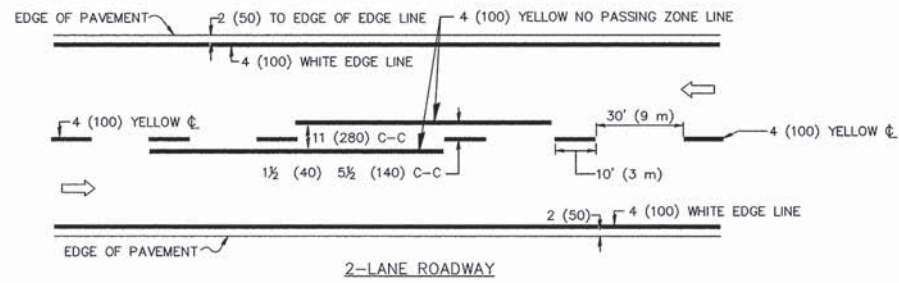
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

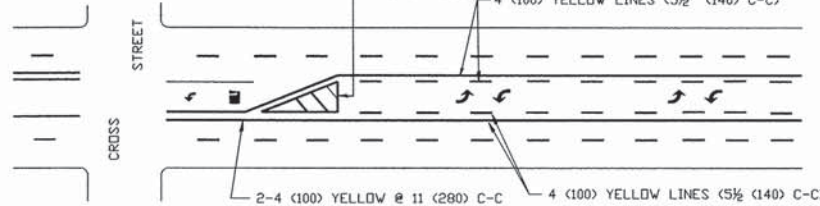
SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	32
TC-10			CONTRACT NO. 61C14	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (500)				

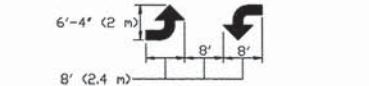
Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\33-TC13.dwg Oct. 13, 2015 10:15am



MEDIANS OVER 4' (1.2 m) WIDE

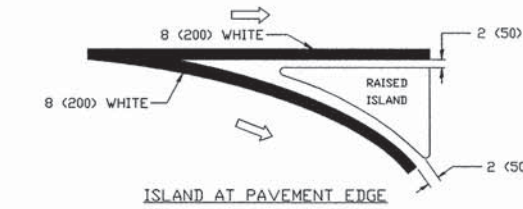
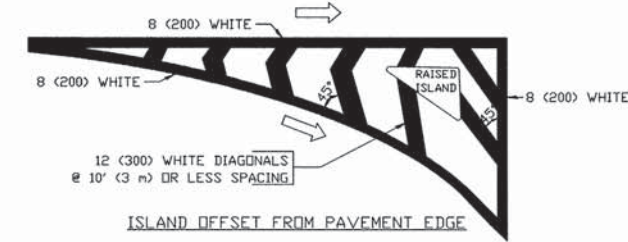


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

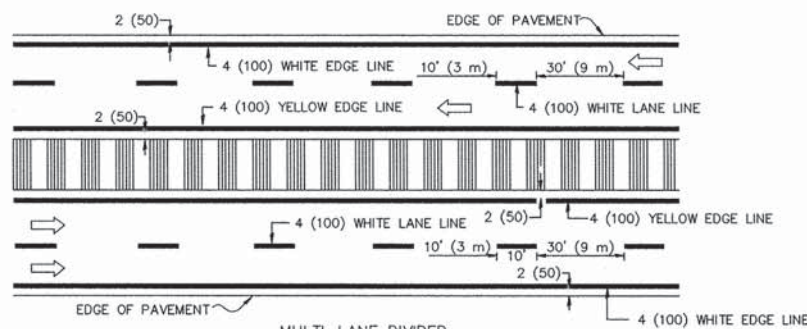
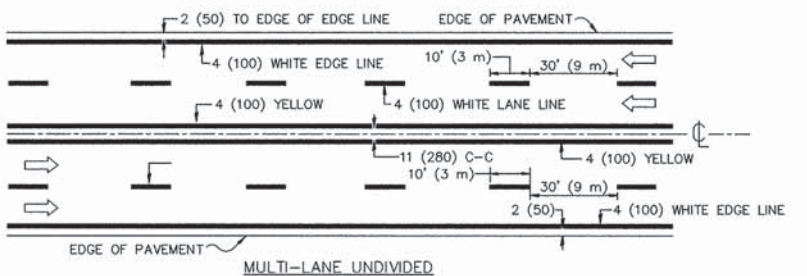


TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION	4 (100)	SOLID	YELLOW	5 1/2 (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	5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (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.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
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))

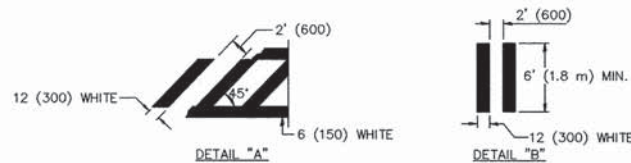
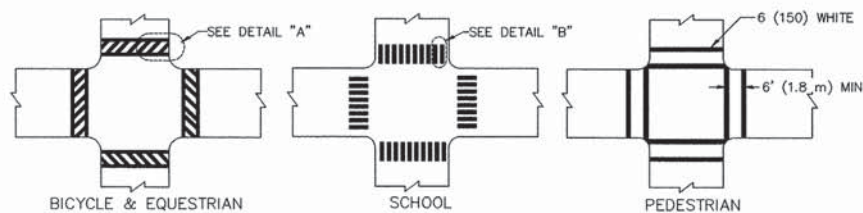
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

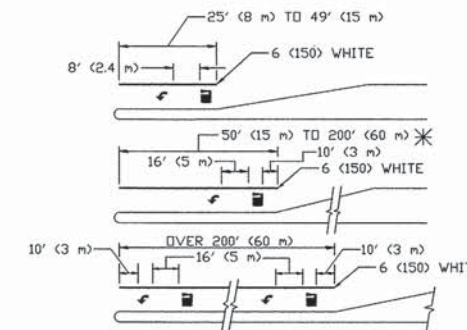


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING



TYPICAL CROSSWALK MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
* AREA = 15.6 SQ. FT. (1.5 m²) □ AREA = 20.8 SQ. FT. (1.9 m²)

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

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

FILE NAME =	USER NAME = drivakosgn	DESIGNED - EVERS	REVISED - T.RAMMACHER 10-27-94
		DRAWN -	REVISED - C. JUCIUS 09-09-09
	PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

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

MS R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	33
TC-13		CONTRACT NO. 61C14		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (500)				

E.H.E. PROJECT NO. 125-15-02401

Drawing file: W:\Projects_by_Village\Brookfield\12515024 - Shields Ave Improvements\33-TC_21_2013.dwg Oct 12, 2015 - 11:18am

ROUTE MARKERS

FOR U.S. ROUTES
MI-40-2424

FOR ILLINOIS ROUTES
MI-50-2424

R.R. UNMARKED ROUTES
SPECIAL 24" x 18" VARIABLE
4" BLACK LETTERS ON WHITE
REFLECTIVE BACKGROUND

ARROWS SIGNS

M5-1L-2115

M5-1R-2115

M6-1-2115

M6-1-2115

M6-3-2115

CARDINAL DIRECTION & DETOUR SIGNS

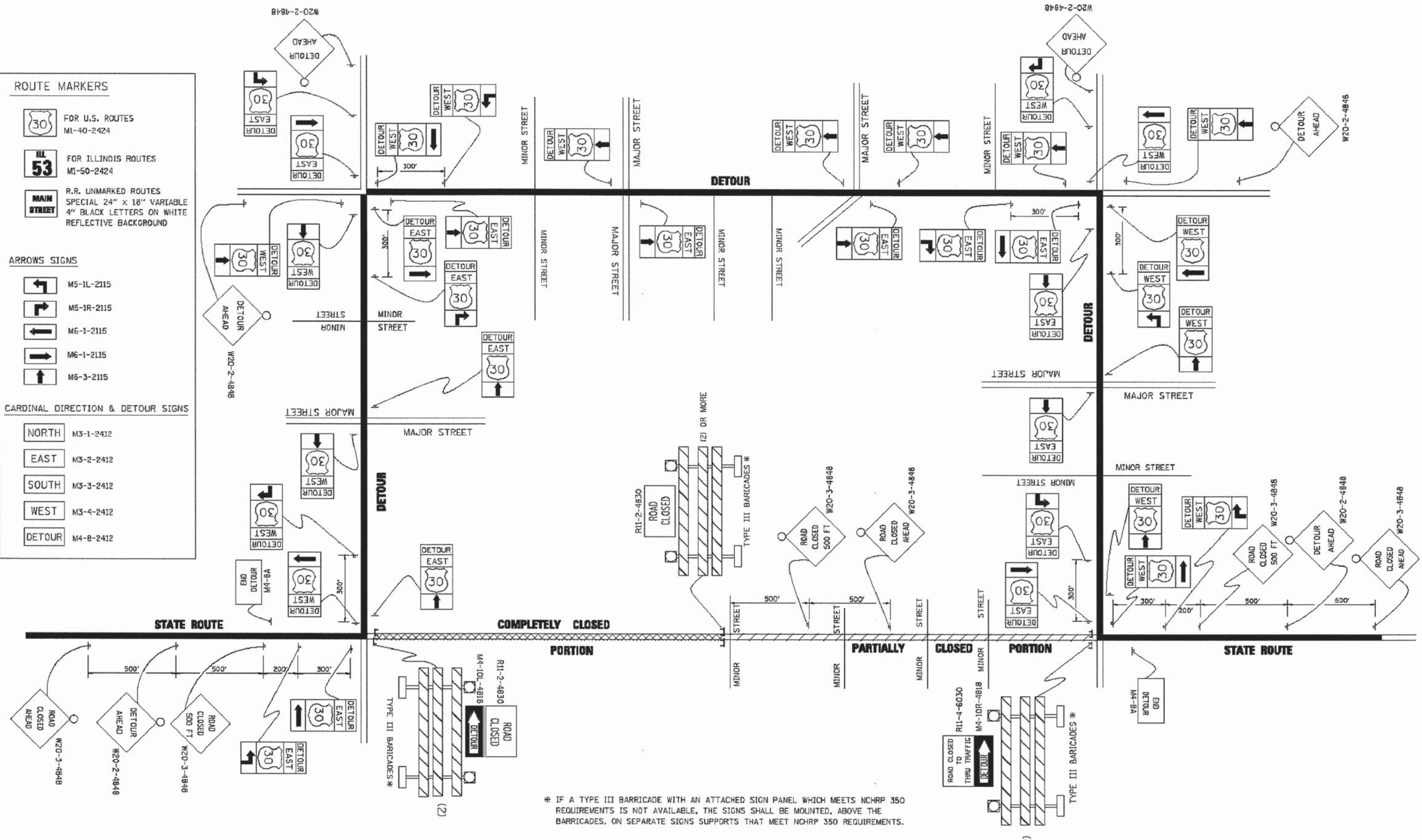
NORTH M3-1-2412

EAST M3-2-2412

SOUTH M3-3-2412

WEST M3-4-2412

DETOUR M4-8-2412



* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

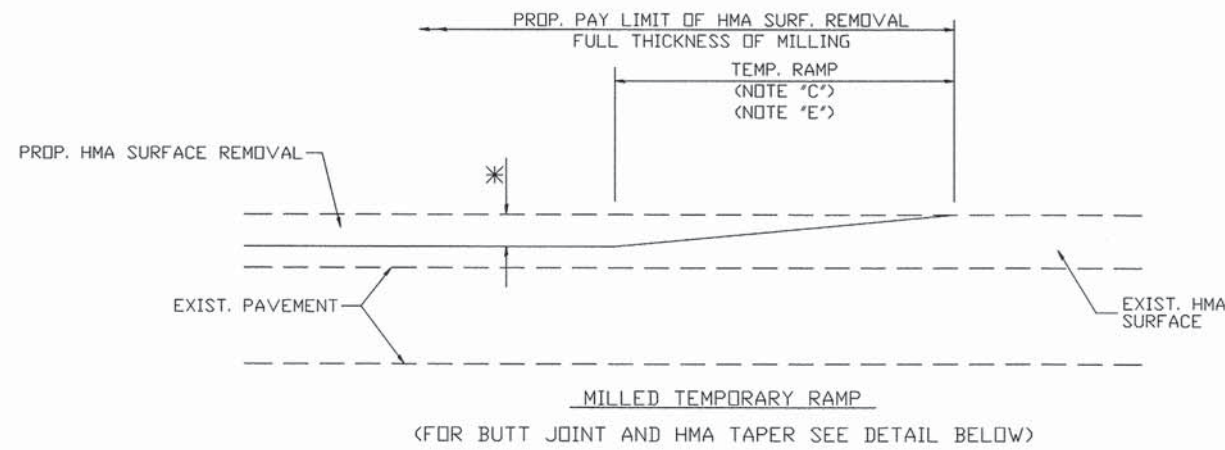
FILE NAME =	USER NAME = dvrakocgn	DESIGNED -	REVISED - 10-18-02
ea\p\work\p\12515024\DRIVKACGN\48108318\4821.dgn		DRAWN -	REVISED - R. BDRO 09-14-09
PLOT SCALE = 49.9999' / IN		CHECKED -	REVISED -
PLOT DATE = 9/14/2009		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

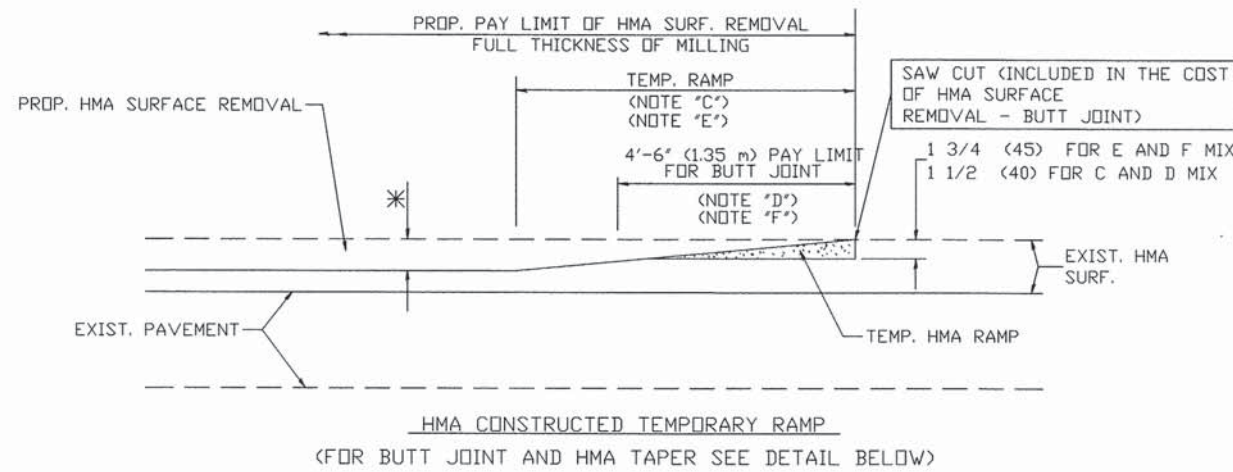
DETOUR SIGNING FOR CLOSING STATE HIGHWAYS	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A. RTE. 1365	SECTION 15-00128-00-RS	COUNTY COOK	TOTAL SHEETS 35	SHEET NO. 34
TC-21		CONTRACT NO. 61C14		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (500)				
E.H.E. PROJECT NO. 125-15-02401				

Drawing file: W:\Projects_by_Village\Broadfield\12515024 - Shields Ave Improvements\35-6432.dwg Oct 13, 2015 - 10:15am

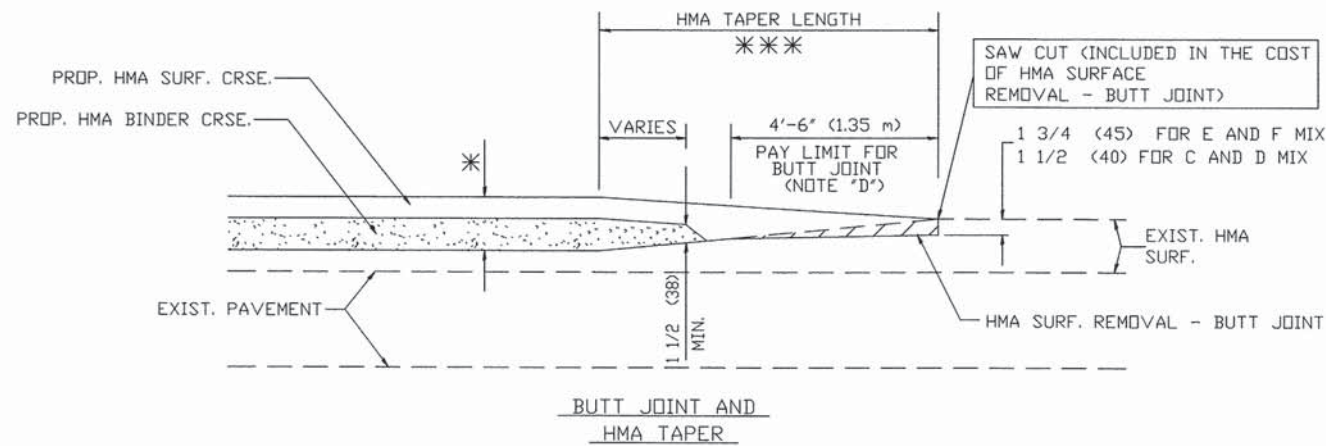


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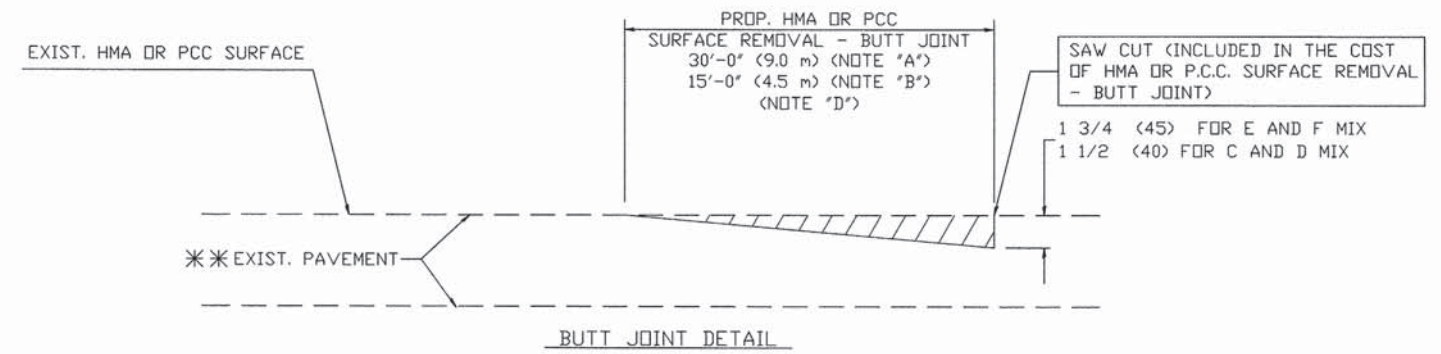


OPTION 2

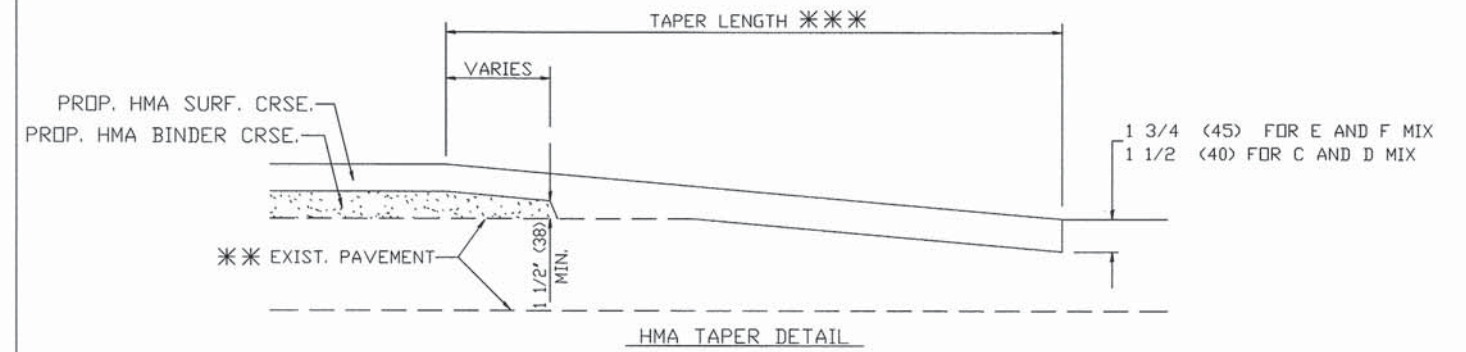
TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

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

NOTES

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

BASIS OF PAYMENT:

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

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

USER NAME =	DESIGNED - M. DE YONG	REVISED - R. SHAH 10-25-94
PLOT SCALE =	DRAWN -	REVISED - A. ABBAS 03-21-97
PLOT DATE =	CHECKED -	REVISED - M. GOMEZ 04-06-01
	DATE - 06-13-90	REVISED - R. BORO 01-01-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND
HMA TAPER DETAILS**

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

MS RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1365	15-00128-00-RS	COOK	35	35
BD400-05 (BD-32)			CONTRACT NO. 61C14	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT M-4003 (500)				